A WINDOW OPEN ON THE WORLD

The UNESCO Courier

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NEW PATHWAYS FOR THE BLIND

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THE CONCERT OF THE BLIND

The "concert" given by blind men at the St. Ovide's Fair in Paris in 1771. This humiliating scene so revolted Valentin Haüy that he decided to devote his life to helping the blind. He initiated the art of embossing books with raised lettering which the blind could be taught to read, started the earliest library for the blind and created in Paris the world's first school for blind children, which still exists as the National Institution of the Young Blind. In time he was to become known throughout Europe as the 'Father and Apostle of the Blind.

As he was strolling through the streets of Paris one September day in 1771, a young Frenchman, Valentin Haüy was attracted by the sight of a crowd hooting and laughing in front of a large booth at the St Ovide's Fair, then being held in the Place Louis-le-Grand (now Place Vendôme). On a platform raised above the tables of this open-air café, ten blind men scraped their bows in pantomime, drawing shattering discord from violins, cellos, basses and viols.

They stared blankly at sheet music turned on the racks so that the notes were visible to the jeering audience. Their sightless eyes were ringed with huge pasteboard spectacles devoid of glass. They wore grotesque robes, with dunces' caps and asses' ears. Every day for two months they had scraped, fiddled and kept up a monotonous accompanying chant, while their audience jeered, banged tankards on the tables and screeched bawdy jokes.

Haüy viewed the scene with a mixture of pity and horror and, years later, recalling this significant moment in his life, he wrote:

"Why was it that a scene so dishonourable to humanity did not perish in the instant of its conception? Why was it that poetry and picture should lend their divine ministration to the publication of this atrocity Ah! It was impossible that the scene before my eyes, bringing deep sorrow to my heart, should not inspire and arouse my soul.

"Yes," I said to myself, seized by an exalted enthusiasm, "I will substitute the truth for this mockery. I will make the blind read. I will put in their hands volumes printed by themselves. They will trace the true characters and will read their own writing, and they will be able to give harmonious concerts. Yes, atrocious malinger, whoever thou art, the ears of the ass with which thou would'st degrade the head ofmisfortune, shall be attached to thine own."

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COVER PHOTO

Blind students at the Arizona State School for the Deaf and Blind, U.S.A. running a race on their outdoor track. Athletes are guided by special rails, but with practice touch on the rail is almost dispensed with. Dangling strings enable Blind runners to count thelaps-eight to the mile. They are so arranged that they gently brush the runner's face as he goes past them. See page 24.

Photo Ray Manley © Camera Press Ltd., London.

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Editorial Offices
Unesco, Place de Fontenoy, Paris 7e, France

Editor-in-Chief
Sandy Koffler

Associate Editors
English Edition : Ronald Fenton
French Edition : Alexandre Leventis
Spanish Edition : Jorge Carrera Andrade
Russian Edition : Veniamin Matchavariani

Layout & Design
Robert Jacquemin

All correspondence should be addressed to the Editor-in-Chief.

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ILO

International Labour Office expert A. Asenjo (above, on right of photo) himself blind, is helping Brazil to develop its vocational rehabilitation services for blind persons. He is seen here in a Sao Paulo printing shop with blind workers who are assembling Braille publications. Opposite page, at London's School for the Sightless, the boy reading to his friends from a Braille book of medieval legends does so with such speed that no one hearing him would guess that he is blind.

WHEN IS A PERSON CONSIDERED BLIND?

by

Nino Frank

ABSOLUTE and total blindness is almost an anomaly. Most blind people can "see" to a certain extent or at least recreate for themselves the image of what they can no longer directly perceive, using what are sometimes called "the eyes of the mind" or "the eyes of memory". For the fact is that only four blind persons in every hundred are under 20 years of age and rarer still are those afflicted with blindness before the age of five by which time a child's eye has absorbed a multitude of images of the surrounding world. Whereas the proportion of blind to seeing people in the world is about 350 per 100,000 inhabitants, that of children under five is only seven per 100,000.

Sustained by hearing, by touch and even by smell, a person who has lost his sight still has the power to create a light within himself and to reconstruct the world around him. Thanks to this capacity he is no longer someone "different" from his fellows and has certainly no need of the kind of hurtful and upsetting pity which people so often show towards him.

What he does need and has the right to is the consideration and help of society and this at once raises, as it has always done, the problem of the exact status of the blind in the community. As total blindness is comparatively rare, the problem in most cases is to decide to what extent a person's power of vision is impaired, thus placing him in a special situation. Blindness therefore, has come to be measured in practical or occupational terms, by which the expression "blind" denotes "any person who, by reason of the physical condition of his eyes, cannot live a completely normal life".

What, then, is a blind person? If some are deprived of the least perception of light, others can still register light and shade, can see colours if they are strongly lit, but cannot distinguish forms; others, again, can perceive forms, but are incapable of determining the exact place of these in relation to others. There are many other

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variations. Some people have relatively good visual acuity in the morning and virtually none in the evening. In some a perfectly adequate power of sight is undermined by physical defects such as nystagmus (a regular, involuntary oscillation of the eyeball). Others, with sufficient central vision, have a reduced peripheral field. If such people are not literally "blind"—*ab oculis,* or "deprived of eyes", a conception etymologically preserved in the French word *aveugle*—they nevertheless are unable to live a normal life—to work, to study or to move about as freely as others.

The concept of the visual field is a leading factor in any definition of blindness. A normal eye covers 135 degrees on the horizontal axis, and both eyes together, about 180 degrees; the field of vision on the vertical axis is less—about 105 degrees—as it is limited by the arch of the brow. In reaching definitions of blindness, several countries make use of these elements. In the United States, for instance, a person is considered legally blind if his central vision is less than a tenth of the average or his visual field is less than 20 degrees.

The French definition of blindness includes anyone whose central vision, even when corrected by spectacles, does not reach a twentieth power of normal sight—anyone, that is, who cannot distinguish at one metre, something which a person with normal sight could see at twenty metres.

German law is far more rigorous and only recognizes as blind and legally entitled to assistance those whose vision is one-sixtieth of the normal. Bavaria goes even further and its definition of blindness only covers those with one-hundreth of normal vision.

Several countries still measure blindness by the distance at which the outstretched fingers of the hand can be counted—a metre in most cases, but as much as three metres in Egypt until recently. The two extremes in criteria are those of Switzerland which in general recognizes any person as blind if he is unable to perform work requiring sight, and India, which only acknowledges total blindness.

Variations like these have stimulated the search for some standard definition which would at once provide a universal criterion for use by all countries and which could eventually be established by international agreement. A standard definition of this kind was outlined in a report submitted in 1954 to the U.N. Social Affairs Division. The report was also presented the same year to the General Assembly of the World Council for the Welfare of the Blind (WCWB) in Paris. It proposed that the benefits enjoyed by the blind should be given to persons possessing not more than 3/60ths of normal vision (after correction by spectacles) or suffering from a defect of vision (i.e. a reduction of the visual field) which reduces its practical efficiency to 3/60ths.

Statistics on blindness throughout the world are not strictly comparable because of the variation in national definitions. The proportion of blind people in the United States appears higher than in France because the American definition takes 1/10th vision as its standard while France takes 1/20th. After laws to improve the lot of the blind were passed in Britain, the number of registered blind people increased from 28,000 to 60,000. Furthermore, in some countries with high proportions of blind people —China, Egypt and India, for example—available figures are not absolutely reliable.

How many blind people are there in the world? A report submitted to the World Council for the Welfare of the Blind in Rome, last year, estimated that there are about nine and a half million, or 3.58 in every thousand people, and that of these more than seven million live in rural areas. The report, presented by Dr van Schalkwijk, Chairman of the Rural Activities Committee, said that over 3,600,000 could be rehabilitated, more than two million being capable of agricultural work.

© Pierre Baudin

JOBS OF EVERY KIND are now open to the blind thanks to modern appliances. Blind shorthand typists, for example, now have an almost noiseless machine for shorthand dictation at a speed of 140 words and more a minute. The French typist shown here is working from a tape-recorded text. On his right is a special pad on which he can make notes by perforating the paper with a stylet, guided by a slotted mobile ruler. Some of the world's early typewriters were devised primarily for the use of the blind.

The Unesco Courier. — June 1960

Despite host of gadgets

SCIENCE STILL SEEKING TRUE ELECTRONIC SUBSTITUTE FOR SIGHT

by M. Robert Barnett

WHETHER it be a simple device for the writing of Braille, or the exciting promise of vision through electronics, the problem of persons deprived of eyesight has long attracted the interest and energy of scores of technical scientists. Throughout the 130 years since Louis Braille came up with his system of embossed printing the variety and number of mechanical or electronic appliances designed to offset the handicap of blindness has been extensive—and yet, modern science still has brought no major breakthrough that would constitute real news for the world's blind persons.

The student of the problem must first attempt to understand just what is the handicap of blindness; that is, if he himself is not blind. The world-famous Helen Keller has often said that the greatest problem facing the blind is the attitude of society toward them—and while she was referring primarily to the handicap of social segregation and to barriers to employment, her statement does have a direct significance here.

Basically, most people believe that the loss of sight reduces the human being into a vegetable-like organism that lives and breathes but which has lost all power to function normally. Upon closer inspection, experience or study, this exaggerated concept is found to be quite unreasoning. Notwithstanding loss of sight, the average human being of normal intelligence and stable temperament has an amazing array of personal capacities. Blindness, per se, does not change this fundamental fact. The blind person can be assisted greatly by special tools and devices but only too often the proposed tangible devices upon examination do not prove useful in a working situation. Even the otherwise skilled and well-meaning inventor is not free of misconceptions and is often startled at not meeting with enthusiastic acceptance of his ideas by agencies serving blind persons or by the blind themselves.

An examination of the many reports of experiments and existing catalogues of practical appliances shows a consistent adherence, however, to a recognition of the real problem which blindness imposes. This problem breaks down, generally speaking, into two large challenges to scientific imagination—communication and mobility. The first, more simply stated, means the obvious barrier of blindness to reading and writing, while the second refers to the more subtle and complex question of how to get about efficiently and safely from place to place.

Past accomplishment and future lines of design and production depart from these two major challenges into a variety of less dramatic types of appliances that assist the blind person to meet various tasks in the household or on the job. The essential and most significant fact at the moment nevertheless is that none of the dreams of blind persons themselves or of their imaginative scientific friends about an outright electronic substitute for sight in reading and in travel have even begun to be realized.

Throughout the world at this very moment there is a growing awareness of the need for an intensive objective re-analysis of the basic theories that most technologists have accepted in the pursuit of a particular experiment. In the English language there is a growing usage of the words "human engineering," an expression designed to convey the need to fit the machine to the man rather than fitting the man to the machine.

FURTHER, most of the recent advances in either the field printing or of personal mobility devices overlook the cold facts of economics. Those intended for the acceleration of the printing of Braille books, for instance, may actually involve an increase in cost of production over what already is an expensive matter. Those intended for the use of individuals—even if found to be of practical value—would be units whose cost would be far beyond the ability of average people to purchase or for social agencies to supply at public expense.

Finally, a general lack of exchange of information among the small but noteworthy army of thinkers and designers often causes the expenditure of time and funds upon lines of research or the actual construction of prototypes that earlier and similar experimentation already has shown to be unproductive of practical results.

An informal appraisal of the total picture, however, has a brighter side. Within recent months, there has been a refreshing new attempt to bring some of America's best minds to bear upon basic problems. It is generally believed of late that much of the lack of success in this field is due to failure to examine the real impact of sensory deprivation upon the human being. Similar lines of thinking recently have been expressed openly in Scandinavian and United Kingdom circles concerned with service to blind people. Such utterances and conferences, however, must at some point be brought to recognizable stages of crystallization of thought.

During the past five years, there has been an acceleration and diversification of efforts to examine the potential for this field which arises through the use of electronic computers. While the imagination of many persons has been stimulated to believe that machines such as the IBM

CONT'D ON NEXT PAGE

M. Robert Barnett is Executive Director of the American Foundation for the Blind, Inc., and the American Foundation for Overseas Blind, Inc., New York. He is also Chairman of the Committee on Technical Research, World Council for the Welfare of the Blind.

FROM SELF-THREADING NEEDLES TO LIBRARIES OF TALKING BOOKS

704 may somehow produce in the form of Braille type books and periodicals for blind persons in a matter of minutes, these interpretations have not been kept in proper perspective. Nevertheless, remarkable progress has been made in programming such machines to produce advanced forms of Braille in an economically short time, provided that some new light can be shed upon the most practical types of input and output. At the moment, there is intense interest throughout the world in the present status of such experimentation as well as a desire to examine the long-range implications.

The application of modern techniques in the field of sound recording, relatively well-known in English-speaking countries for a quarter of a century, has only recently been introduced in others. The first "international" recorded library service has been under way for European countries for about three years, and is enjoying gratifyingly rapid expansion.

RADICALLY new designs are being suggested thanks to new impetus among private concerns who are showing a tendency to believe that there is a general market for longplaying recording machines. Within recent months, the library programme of the blind in the United Kingdom has partially introduced the use of cassette-type tape playbacks. The United States with more than 50,000 disc-type record players in use is reluctant to convert, but is carefully studying local and foreign experience with tape.

There are in existence a number of highly useful "gadgets" available in various countries which do help blind persons in everyday tasks of daily living, study, work, and recreation.

Changes in daily living as a whole have had a kaleidoscopic effect on blind people. Radios, telephones and electricity have done a great deal for them, as well as central heating, insecticides, antibiotics, typewriters and recorders. There are, however, a great many special aids of various kinds which make life easier for a blind person. These include Braille watches, dials for cooking stoves, measures for food, self-threading needles, bread cutting boxes, signature guides and many others. For the blind woman there are aids for personal grooming, for the blind man safety and electric razors have been a boon.

Nowhere is the blind person better off today than in the home, for here gadgetry has come to its fullest bloom. To an astonishingly large extent, the devices to simplify life for people with sight have also simplified life for those who are blind.

There are sufficient tools in existence to enable the blind student to pass courses in physics, mathematics, chemistry, biology or geology. A vacuum forming process is producing relief maps at low cost and can be used for designs and diagrams and in other ways to assist the study of the sciences. Special mathematical devices are available that can work out calculations of the most intricate kinds.

There are special appliances that enable a blind person to do a job, and persuade an employer that the job is possible. For instance, there are measuring devices for length, weight, temperature, time, relative humidity, barometric pressure, blood pressure, voltage, current, resistance and capacity. The blind shorthand typist today has an almost noiseless machine on which he can take shorthand dictation at a speed of 140 words and more a minute. Other tools are produced for the use of blind workers, such as piano tuners, shoe repairmen and carpenters. Blind telephone operators are enabled to function with the aid of special adaptations to standard switchboards.

A constant search for new games and other recreational aids is going on. Among standard games especially adapted for the blind are chess, draughts, dominoes, puzzles and playing cards. Bingo boards can be had, as can a game of fairly recent origin called scrabble which can also double as an anagram game when extra tiles are secured. For the active blind adults there are many activities such as rowing, riding, skiing, wrestling that can be carried on with little or no assistance. A portable

'You just must watch what you are doing'

As blind Joyce Rominger handles the telephone calls that come through her switchboard at an industrial plant in Chattanooga, Tennessee, she manipulates the keys and controls as deftly and swiftly as her sighted colleagues. She can do so thanks to a special Braille dial switchboard—one of many now in use in various countries. Joyce graduated from the Alabama School for the Blind in 1956 and afterwards took Braille switchboard training. She overcame her next big hurdle when she found an employer who believed she could handle a dial switchboard and was ready to go to the trouble and expense of installing one. The Braille attachment to the switchboard is a square box containing rows of plungers under each of which is a station number in Braille. When a call comes in, the corresponding plunger pops up with a buzz. Joyce locates the plunger, reads the Braille below it (left, below), runs her fingers across a strip of Braille on the switchboard to locate the station number (left, above), inserts the jack, reads the Braille strip under the switches and flips the correct one. "How in the world do you keep from getting all those lines tangled up?" someone once asked her. "Well, you just have to watch what you're doing," she replied.

Photos © Camera Press Ltd., London.

bowling rail is the only special piece of equipment which comes to mind.

When blindness is the sole disability there is probably no great need for research into medical aid. Often, however, blindness is one aspect of a systemic disease as in diabetes or Hansen's disease (leprosy) or multiple sclerosis. For the blind diabetic, special syringes with devices for locating the centre of the rubber cap on the insulin vial and with automatic injections are available. For other purposes there are clinical thermometers and drop measures.

Helen Keller's example has helped bring into focus not only the needs of the deaf-blind but their potentialities as well. A growing number of deaf-blind persons are finding employment and the need has been met for a suitable alarm clock which would shake the bed at the proper time for rising. A device, such as the American Tellatouch, has been developed which activates the appropriate Braille symbols from a keyboard similar to the typewriter keyboard.

The increasing concern about past failures and future promises currently is the basis for a proposed international congress on technology in blindness. With the formal endorsement of the World Council for the Welfare of the Blind and the active co-operation of national agencies in a number of countries, interested bodies in the United States are now attempting to arrange for the financial support that would be needed to prepare and carry out such a conference. While the proposed meeting, probably to be held in late 1961, will of course provide an opportunity for exchange of information and views on every appropriate item, its principal objective will be to establish if possible just what lines of investigation and construction hold the most promise for eventual success.

A profoundly honest re-searching of concepts is hoped for. At its conclusion, and with the expected co-operation of all organized research centres and agencies for the blind, there should be the establishment of a continuing system for the reporting of research in progress and results obtained—such information to then be available to others who wish to enter their ideas into what is undoubtedly an exciting challenge.

Braille translation by computer

TODAY much attention is being given to the automation of Braille publishing so as to give blind readers greater access to specialized books and articles. Needs of the blind far exceed the Braille books available despite the efforts of Braille publishing houses and volunteer transcribers.

Now a new programme has been developed by IBM using its famous 704 electronic computer, in co-operation with the American Printing House for the Blind. Together they have developed a process of using the computer to translate the printed text into Braille. The machine can convert a 300-page book into Braille in one hour—a job that would take skilled translators more than six days. Writing Braille is a complicated process where symbols often change their meaning in a different context and many special contractions and abbreviations, much like shorthand, are used.

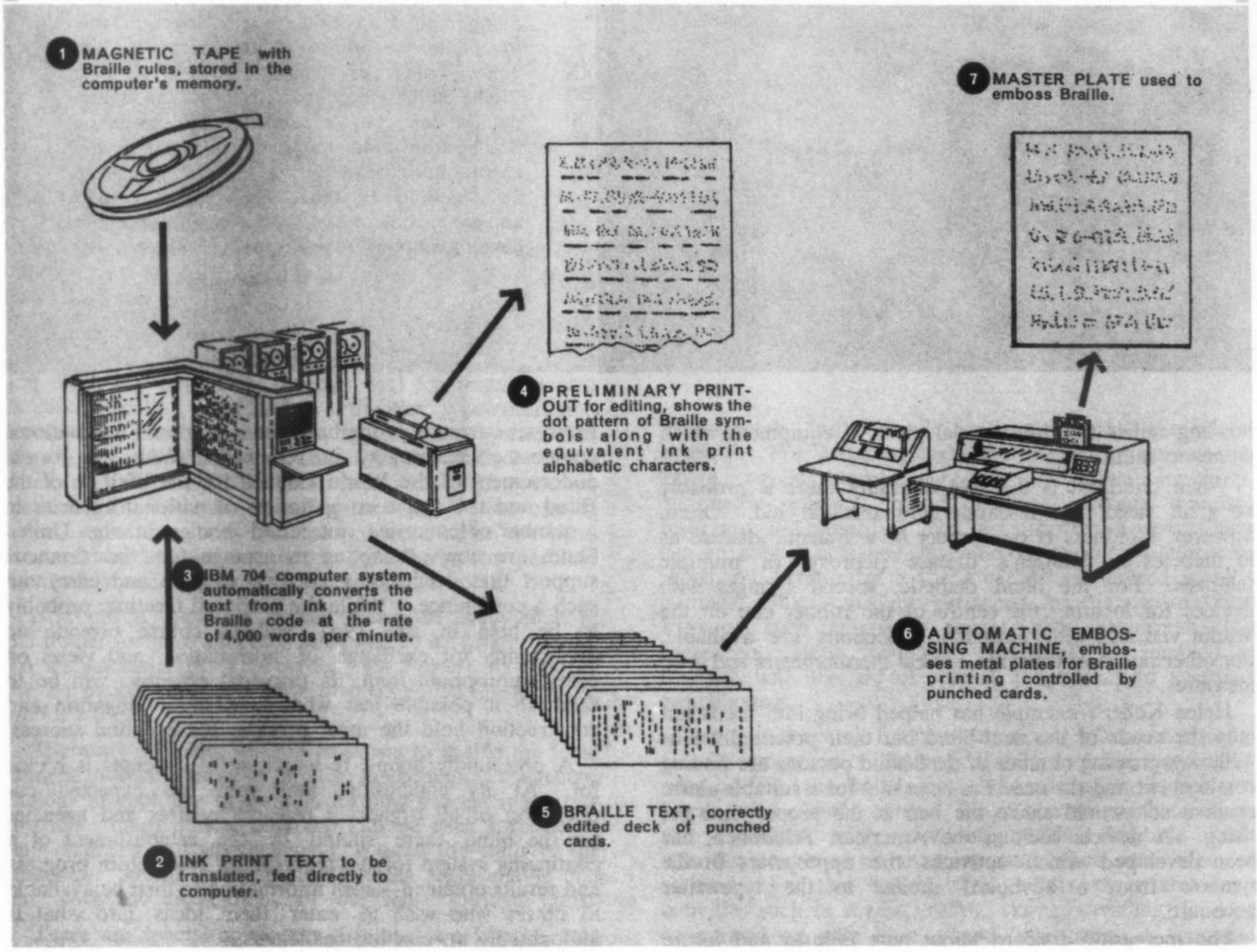
Texts to be translated by the electronic computer are first transcribed on punched cards. These are then fed directly into the computer, which has had stored in its memory a programme or set of rules for conversion of English into Braille. The IBM 704 executes as many as 600 instructions per word in less than a fortieth of a second. Contractions and abbreviations are determined by matching the letters against an alphabetical table of Braille equivalents.

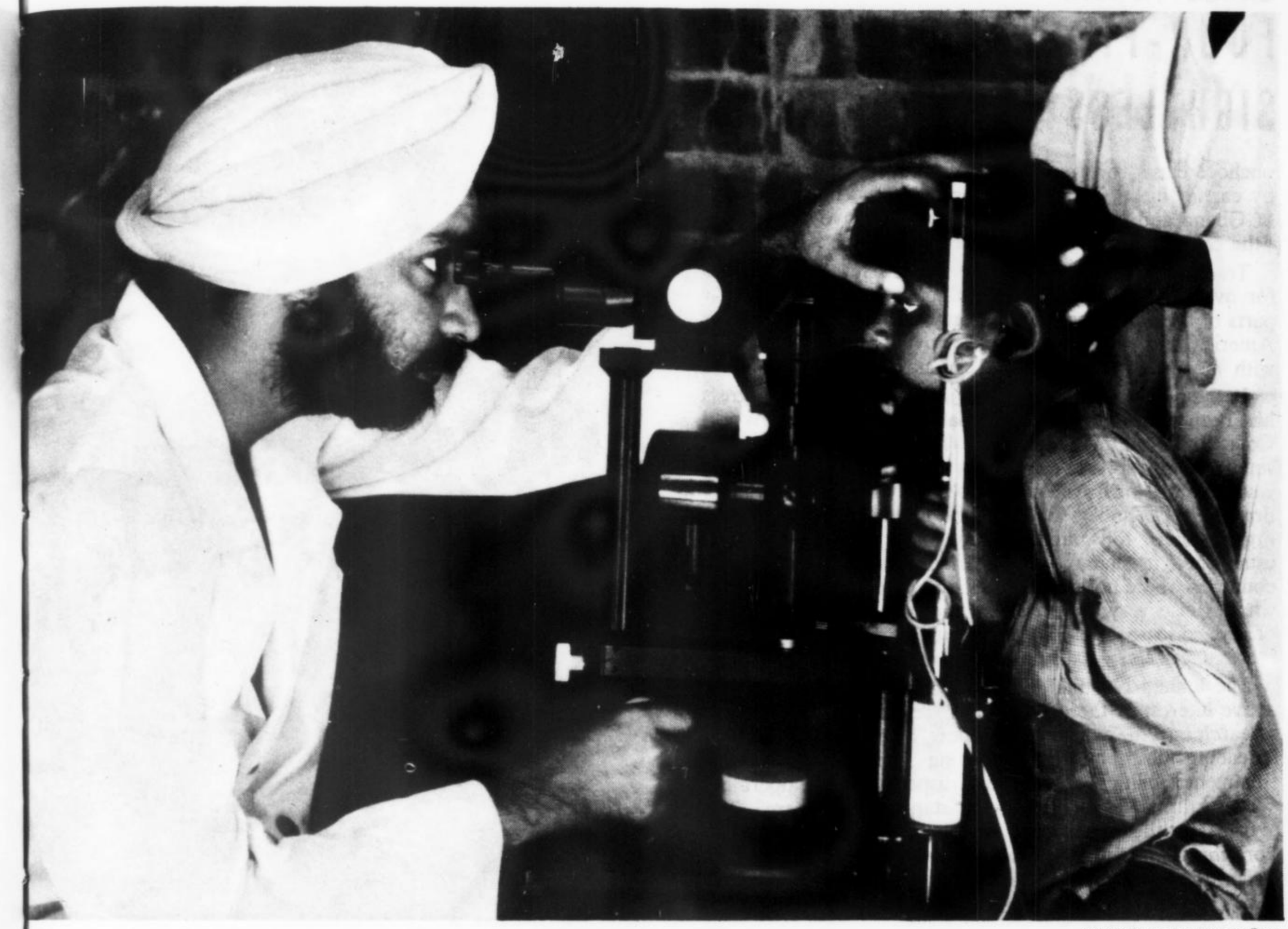
How does the process compare with that made by a human translator? For example, suppose that the word "changeable" is to be transcribed. A skilled human transcriber would write this as seven Braille characters, Ch-a-n-g-e-a-ble, where ch and ble are contractions each represented by a single Braille character. Though there is also an "ea" contraction in Braille, the transcriber does not use it because here "e" belongs to a root word, "change," while the "a" belongs to a suffix, "able."

To accomplish the same result, the IBM 704 goes through about 600 separate steps for the average word, but converts 4,000 words per minute into Braille—roughly 100 times faster than the human transcriber. This is made possible because electrons travelling at the speed of light, enable the machine to handle 40,000 instructions per second.

The translated text emerges from the computer in coded symbols on a punched cards and these, in turn, are fed to the 704's printer unit which reproduces Braille symbols above the English text for editing purposes. After editing, the corrected punched cards are fed into an embossing machine which produces metal plates for a rotary press.

In some respects the programme of machine conversion to Braille resembles mechanical translation from one language to another—a much more difficult problem on which many research organizations are working. Diagram below shows how Braille translations are made by the IBM computer.


1 MAGNETIC TAPE with Braille rules, stored in the computer's memory.
2 INK PRINT TEXT to be translated, fed directly to computer.
3 IBM 704 computer system automatically converts the text from ink print to Braille code at the rate of 4,000 words per minute.
4 PRELIMINARY PRINT-OUT for editing, shows the dot pattern of Braille symbols along with the equivalent ink print alphabetic characters.
5 BRAILLE TEXT, correctly edited deck of punched cards.
6 AUTOMATIC EMBOSSING MACHINE, embosses metal plates for Braille printing controlled by punched cards.
7 MASTER PLATE used to emboss Braille.



WHO Photo by Homer Page

EYE INFECTION is a major cause of blindness, and trachoma the chief culprit, disabling some 400 million people throughout the world. In India, with more than two million blind persons, trachoma ranks as the largest single cause of preventable blindness. Above, Dr. Jatnam Singh, member of a medical team, examines a young trachoma victim in a village of northern India where in some rural areas between 80 and 90 per cent of the people suffer from this infection. The team, with WHO help, works its way through the region, examining patients, organizing mass antibiotic treatment, and carrying out research on spread of infection.

MORE BLIND PERSONS IN CALCUTTA THAN IN THE WHOLE OF CANADA

by W. H. Owens

MORE than a century of effort, mainly through voluntary societies, has opened up a new world of opportunity for sightless people.

While the incidence of blindness is still fairly high in the advanced countries, normally preventable blindness has been reduced to a minimum through the progress and general availability of medical, hygiene and social services.

But the condition of the infinitely larger blind populations in the lesser developed parts of the world is very different indeed. It is worst of all in Asia and Africa where about four-fifths of all the world's blind people live, and where, until very recently, blindness was fatalistically accepted everywhere as one of the irremediable conditions of mankind. Although the highest incidence of the loss of sight is in Africa, where in the upper reaches of the Nile more than 4,000 per 100,000 population have defective vision, by far the greatest concentration of blindness is in Asia.

India alone has more than 2,000,000 blind persons, of whom at least 100,000 are children. In the city of Calcutta there are more blind people than in the whole of Canada. Existing welfare services hardly touch more than one per cent of those without sight, most of whom are widely scattered in villages all over the vast sub-continent and are doomed to live, as the blind of India have always lived, as beggars or family dependents, often in misery and want.

Probably 90 per cent of all the blindness in the lesser developed countries is caused by preventable disease. In West Africa, for example, over 400,000 people suffer from

CONT'D ON NEXT PAGE

FOUR-FIFTHS OF WORLD'S SIGHTLESS IN RURAL AREAS

onchocerciasis, or river blindness, an eye disease spread by carrier flies. This is so rampant in the northern parts of Ghana and Nigeria that these regions have been called "the country of the blind". (Unesco Courier, April 1956.)

Trachoma, which has been a major cause of blindness for over 2,000 years, claims millions of victims in many parts of the world and, in fact, only western Europe, North America and Australasia are relatively free from it. But with modern drugs trachoma can now be cured.

In the past ten or twelve years some remarkable progress has been made. Since its foundation in 1949, the World Council for the Welfare of the Blind has grown from a small group, representing mainly the countries of Western Europe and North America, into a truly international body drawing its members from all the five continents. Central organizations for blind training and welfare are now established in many Asian, African and Latin-American countries where nothing of the kind existed previously, and, what is also very important, methods to check the spread of eye disease are being put into effect on a steadily increasing scale.

The United Nations and its special agencies have taken active interest in the problems, of the blind by intensifying research into the causes of blindness, by controlling disease-spreading pests, and by improving living conditions and treatment facilities. Mobile eye dispensaries are operating successfully in Egypt, India, Pakistan and elsewhere. The World Health Organization and the U.N. Children's Fund contribute greatly to the world wide anti-trachoma campaign.

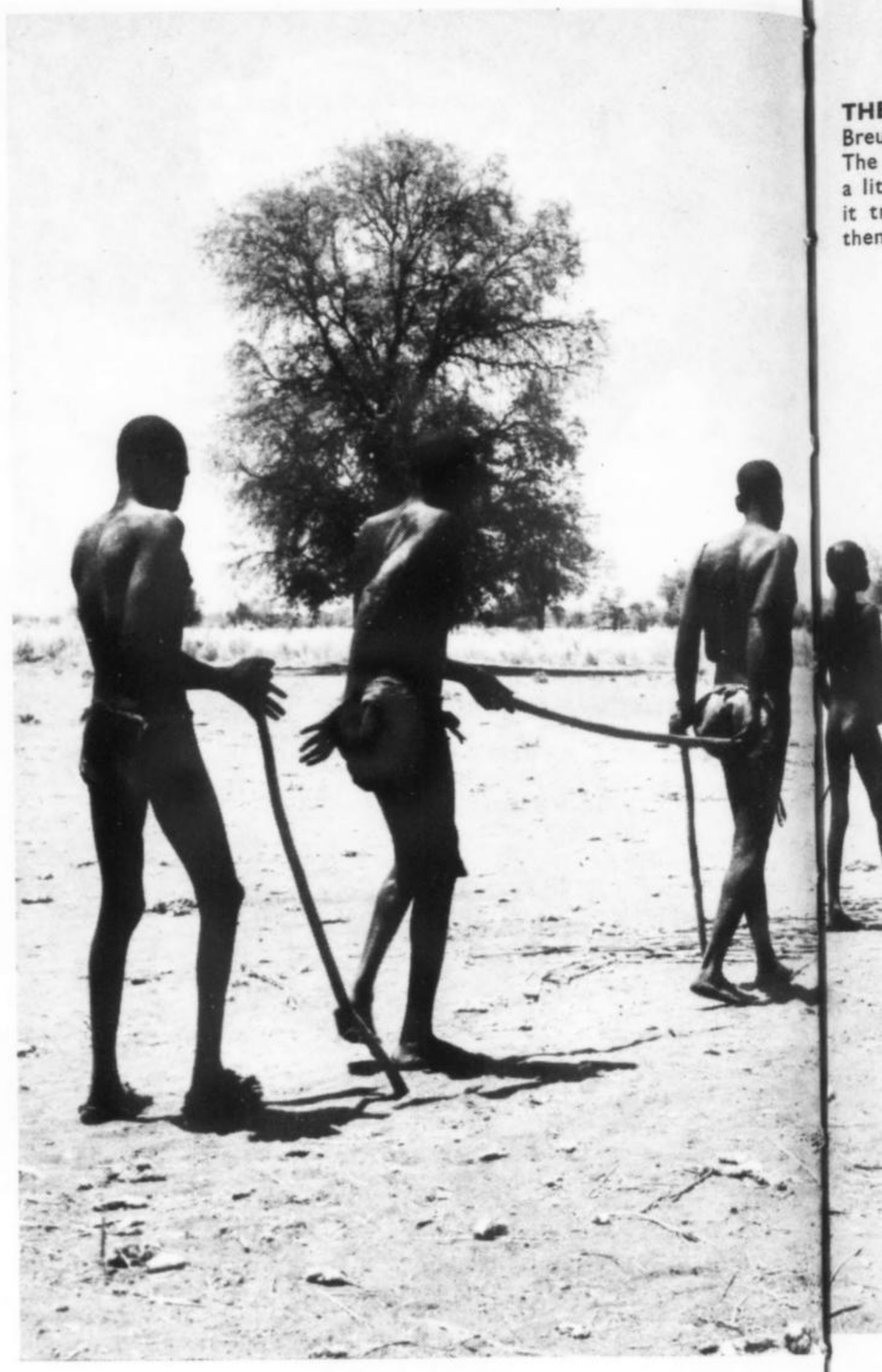
★

VALUABLE research projects have been carried out in West Africa by the Royal Commonwealth Society for the Blind. (This British voluntary organization, founded in 1950, is working through local blind welfare associations in about thirty emergent territories throughout the world.) In the course of a four-year investigation of blindness in West Africa an ophthalmic team, led by Dr Frederick Rodger, travelled more than 100,000 miles through Ghana, the Cameroons and Northern Nigeria, often under very difficult conditions in remote and wild country.

Intensive ophthalmic examinations of more than 8,000 individuals, selected from widely different areas and racial groups throughout the region, showed that trachoma, cataract and onchocerciasis are the main causes of blindness but that much sight is also lost through smallpox, measles, tuberculosis and syphilis. The 350-page report resulting from this investigation, entitled "Blindness in West Africa", is the most detailed and exhaustive study of its kind ever made and has won international acclaim.

For a century or longer the training of blind people has been confined almost entirely to handicraft workshops in towns and cities. Some 80 per cent of the world's blind live in rural areas, however, and up to now very little indeed has been done for them apart from the limited though excellent work of foreign missions. Realizing this, the 1959 Assembly of the World Council for the Welfare of the Blind passed a resolution urging the need for training in agricultural and rural crafts so that sightless people might become useful members of their own communities.

This new conception of blind training has been pioneered with great success in five African countri s and



also in the Far East by the Royal Commonwealth Society for the Blind. The results have been so promising that similar schemes of rural training may soon be launched in other countries. They have demonstrated the value of a policy which, if it were to be applied on a really large scale—for example, through the community development programme of a country like India—might in a few years open up a new age for very large numbers of blind people in the lesser developed parts of the world.

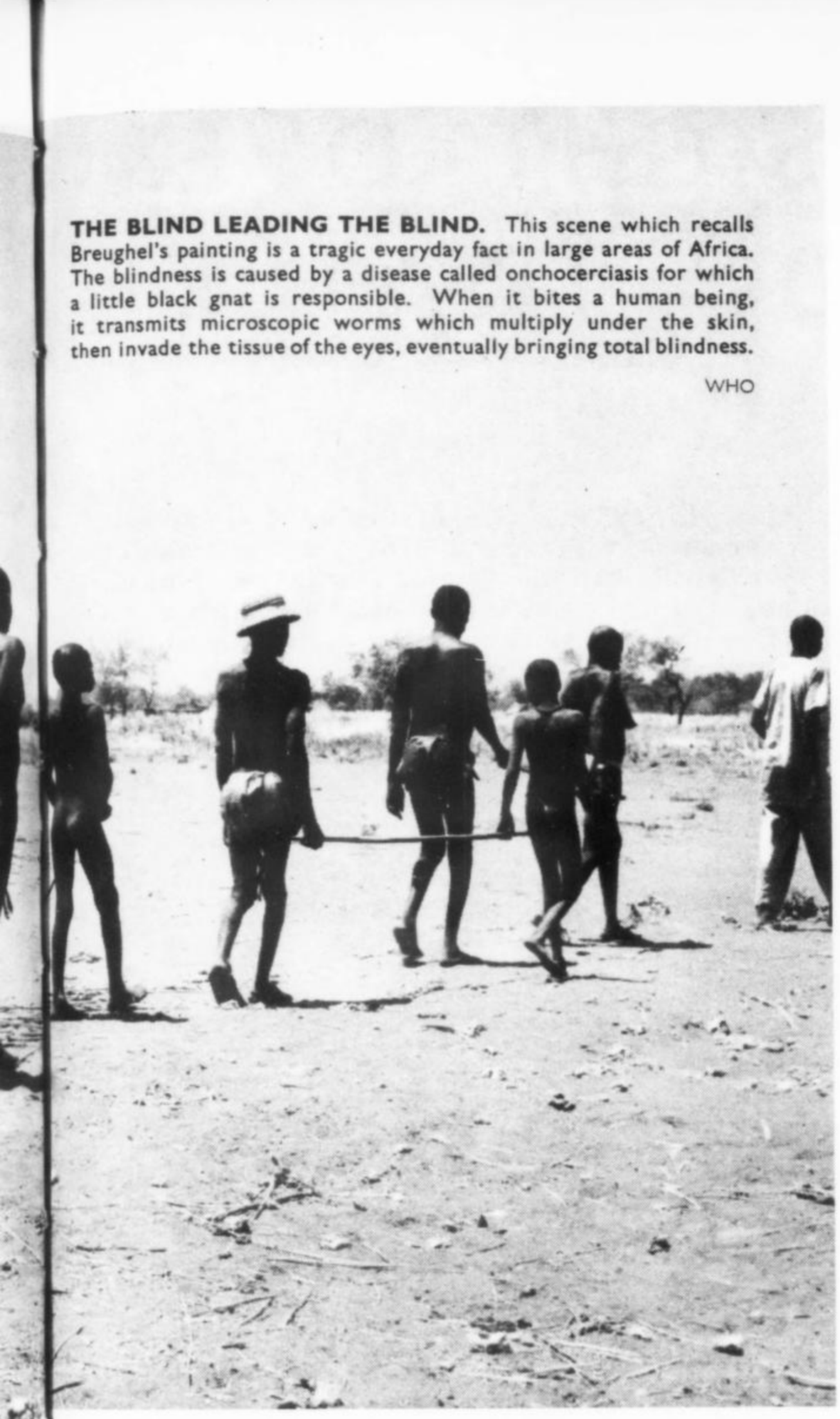
A typical rural training scheme in Africa is the 60-acre Ikeja Farmcraft Centre, near Lagos, which is run for the Nigerian Government. Blind villagers who attend this centre, often with their wives, live for a year in surroundings which are quite familiar to them. During an intensive course the students learn about every branch of agriculture, from the clearing of virgin bushland to the harvesting and marketing of the crops they grow.

Experiments have been made with the cultivation of a wide range of local crops such as yams, maize, groundnuts, cotton, ochra, sun hemp, pineapples and so on. Using mud, bamboo and palm leaf, the students learn also to build their own living quarters and shelters for the livestock. Students also spend a part of each day in the workshop learning to make articles from home-grown materials which will have a ready sale in the villages.

The first sixteen blind students attending the Ikeja centre arrived in a helpless condition and most of them were

THE BLIND LEADING THE BLIND. This scene which recalls Breughel's painting is a tragic everyday fact in large areas of Africa. The blindness is caused by a disease called onchocerciasis for which a little black gnat is responsible. When it bites a human being, it transmits microscopic worms which multiply under the skin, then invade the tissue of the eyes, eventually bringing total blindness.

WHO



undernourished. By the end of the year's training, however, they were all 100 per cent physically fit, able to tackle almost any job on the farm, and confident they could be accepted as useful members in the village communities to which they returned.

How important rural training can be in a country where four-fifths of the blind population are villagers has been shown at the Malayan fishing village of Kuala Besut in Trengganu. For less than £50, the community built and equipped a workshop and dormitory where blind villagers can now provide the local fishing industry with rope, fish frames and traps, brooms and rakes—all made from locally grown materials.

The National Association for the Blind in India has shown keen interest in such schemes of rural training because, as mentioned earlier, most of the 2,000,000 blind of that country live in scattered village communities. The problem in India may be measured by the vast numbers involved, but a start may be made soon.

The second All India Conference for the Blind, held at Bombay in June, 1959, passed a resolution urging the Central and State Governments, together with voluntary societies working for the Indian blind, to establish agricultural and rural training centres which would provide sightless people with adaptive training in simple pursuits in their familiar rural surroundings. Such schemes, it is hoped, may be included in India's third five-year Plan.

HELEN KELLER WORLD CRUSADE FOR THE BLIND

Helen Keller, known as the Ambassador of the Blind, celebrates her 80th birthday this month. To mark this event, the American Foundation for the Overseas Blind is raising a $1,250,000 fund, "The Helen Keller World Crusade for the Blind", to be used for work among the world's sightless people. Miss Keller has been associated with the Foundation since its inception more than 40 years ago and as its International Relations Counsellor has spent much time in areas of the Middle East, Asia, Africa and Latin America where nine-tenths of the world's blind live. Blind and deaf from early childhood, she rose above her handicaps to become one of the best-known figures in the modern world. At 24 she graduated from college; since then has been constantly travelling, writing and working to improve conditions for the world's blind. She has given courage and assistance to innumerable blind people for she believes that the blind should live and work like their fellows, unremarked and with full responsibility. She herself is a vivid example of what special education and training can achieve and she can look back on a lifetime studded with achievements. Perhaps better than anyone she can preach the gospel of self help for she has lived it. Below, during one of her journeys Miss Keller examines a broom made by blind craftsmen in Kfar-Uriel, Village of the Blind, Israël.

USIS

VICTORY IN SIGHT OVER THE BABEL OF BRAILLE

by Sir Clutha Mackenzie

In the century since Louis Braille invented his ingenious "touch" alphabet of raised dots, a Babel of Braille developed as his system was applied in a variety of ways in different languages. In 1949 the Government of India asked Unesco to take up the problem of the unification of Braille, and rapid progress was made towards a broadly uniform Braille system for all languages and scripts. In 1952, a World Braille Council was set up under the aegis of Unesco. Chairman of the Council was Sir Clutha Mackenzie, himself blind, who had been in charge of Unesco's work in this field throughout this time. Here, Sir Clutha describes some of the results that have already been achieved through Unesco's efforts to aid the unification of Braille scripts.

THE task, to which UNESCO set its hand for two and a half years from July, 1949, has brought rich rewards in the field of Braille reading and writing. It brought an end to the long arguments over conflicting systems in

many Asian, African and Latin-American countries and at the same time resulted in the rationalization of the systems used in Yugoslavia and Spain. Through the generosity of the American Foundation for Overseas Blind, Braille presses have been established in many centres throughout the world to print much-needed school text books, magazines and general literature; this has all gone along with a big upsurge in the general rehabilitation of the blind of these great areas.

I first encountered Braille conflicts in 1939 when, at the request of the Government of Bombay, I studied the schools for the blind in that Province. One of the most glaring defects was the existence of two divergent Braille systems in the city of Bombay itself with the result that the children and ex-students of the two schools could not read one another's Braille forms.

When I returned to India in 1942 to establish an Indian St Dunstan's for the rehabilitation of the war-blinded, it appeared that India had no less than eight rival systems.

These arose from the fact that early missions, in founding small scattered schools, adapted Braille in their own ways to local languages. About half of these systems followed the original letters of Louis Braille, the gallant, blind Frenchman who had designed the Braille alphabet in 1827. As Indian languages, however, employ from fifty-five to sixty-five letters, the possibilities of the twenty-six Roman letters were soon exhausted; and almost no uniformity held good among the remaining letters.

Braille, it should be explained, is comprised of the sixty-three possible combinations of dots employed in the domino sox (three dots high and two wide). This is ample for a script of from fifty to fifty-five letters plus punctuation and accent marks; but difficulties arise when the letters exceed these numbers. The schools were all alive to the grave handicaps this situation imposed, but conference after conference failed to bring agreement. The attitude most of the schools took up was that each

would be delighted to attain uniformity were its own code accepted.

The Central Government's Department of Education made a new approach in 1940 when it set up a special committee to study the problem and to recommend a code for All-India. It is accepted practice among modern workers for the blind that Braille matters should be decided by the users of the system, the blind themselves. The Education Department, unfortunately unaware of this, appointed four sighted men, only one of whom had any extensive experience of Braille teaching.

Its report, published in 1943, only contributed to further confusion by adding a ninth system. The findings were referred to me in my capacity as secretary of a Joint Committee of the Departments of Health and Education appointed to report on the big question of the problems of blindness in India. It was impossible to recommend this new code as it complied with none of the basic rules of the Braille system. Simply put, these were that the same letter or the same or nearly similar sound of a letter should everywhere be represented by the same Braille character. Were the Indian blind to confine their reading and contacts to only one language, this would be of little importance; but the fact that the educated Indian blind almost invariably learn at least one foreign language (and often two or even three) makes this principle essential.

Another factor of importance is that most languages employ "contracted Braille." With European languages this form is based on frequency studies of the common combinations of letters used as prefixes, suffixes and digraphs. In English, for example, "ing," "ed," "dis" and the CH, GH, SH and TH all have their single Braille sign. A few of these had been embodied in the earlier Indian systems, most Indian languages expressing these sounds by their own single letters. Again, Indian and many other Oriental languages have more vowels than English, but the additional vowels can mostly be accommodated by the extra vowels of European languages.

We gathered together an ad hoc committee of blinded Indians, each knowing from three to five languages, and the blind English head of a school for the Blind in the Madras Presidency. This Committee designed an Indian code which would fit in with these principles. Their report was duly discussed with the Education Department's Special Committee, but this had no immediate effect on the situation.

Today, however Braille books, especially for educational and vocational training purposes, are being printed at

CONT'D ON NEXT PAGE.

Stamps to honour & help the blind

by C. W. Hill

ALTHOUGH by its very nature philately is one of the cultural pursuits which the blind are unable to enjoy, the philatelist can make an interesting and thought-provoking collection of stamps which have been issued in aid of funds for the blind, or in honour of those who have devoted themselves to helping the blind.

One of two stamps issued in France last December in aid of Red Cross funds portrayed Valentin Haüy who, inspired by the efforts of his contemporary, the Abbé de l'Epée, on behalf of the deaf and dumb, opened a school in Paris for the education of young blind persons. The work which he began in 1784 is now carried on in France by the Valentin Haüy Association and his school has become the National Institution for the Young Blind.

Haüy's experiments with the printing of books in a raised type which the blind could read with their fingertips were continued by Louis Braille, a pupil and afterwards a professor at the National Institution. Braille's portrait is shown on a French stamp of 1948 which paid tribute to his work and the 150th anniversary of his birth was marked last year by the issue in the Soviet Union of a stamp which also bears his portrait. The universal benefits of the Braille type are illustrated on a Brazilian stamp of 1954 issued to celebrate the centenary of the foundation of the Benjamin Constant Institute for the Education of the Blind in Brazil. The design shows a portrait of Constant and the hand of a blind person reading a book in Braille.

Many countries regularly issue stamps bearing a premium in aid of social work among handicapped persons, including the blind. One stamp of the Netherlands charity series issued in 1956 appropriately showed a Rembrandt etching of "Old Blind Tobias", and the two French Red Cross stamps of 1957 reproduced engravings by the seventeenth century artist, Jacques Callot, in which the miseries of poverty and blindness are portrayed with the realism typical of his work. The provision of radios for the blind is another branch of social work for which a French stamp was issued, this being in 1938.

When the new underground Basilica was consecrated at Lourdes two years ago, Monaco celebrated the occasion, and the centenary of the Apparition of the Virgin Mary, by issuing a series of commemorative stamps. One of these recalls the miracle of the workman Bourriette, who had lost the sight of an eye in a mining accident and claimed the complete restoration of his sight when he bathed his eyes in water from the spring of the Massabielle Rock.

A collection of stamps connected with the blind would be incomplete without the issues which honour blind men who have contributed to our cultural heritage. Many Greek stamps recall the epics of Homer, who by tradition was blind, and a bust of the poet forms the design of two recent Greek issues. One of Britain's greatest poets, John Milton, was also blind and his portrait is to be found on a stamp of the Soviet Union issued in 1958 to mark the 350th anniversary of his birth.

BABEL OF BRAILLE *(Cont'd)*

Dehra Dun, and —for the first time in India—in a uniform code capable of serving all the different languages of the sub-continent. At this, the first central institution of its kind in India, a small but very valuable beginning is being made with the immense task of attacking what is one of the major social problems of that country.

Making a report for the Government of China in 1947 we found a similar situation to that in India—eight conflicting codes. Workers for the Blind in China however had the justification that Chinese ideographic script of 50,000 characters was a much harder nut to crack.

The blind British manager of a Peking bank had designed quite an original system. Reuters' Telegraph Co. had discovered that the Chinese language was composed of some 400 syllables and tone marks. Instead of trying to

telegraph the 50,000 ideographic characters, Reuters had serially numbered the syllables. The bank manager replaced these with their corresponding Braille numbers. The result was a system which the Chinese child could master in the course of time, coming to recognise the numbers as the syllables which they represented.

The adaptations of Braille for the various languages employing Arabic script numbered about fifteen. These included, not only the various dialects, but also certain distinct languages from Hausa in the West to Malay in the East. Some of them read from right to left and some from left to right—this directional problem was only solved after some difficulty, but the Arabs courteously yielded to World Braille practice.

I had the pleasure, in Pakistan in 1954, of receiving forty sets of Koran in the new International Arabic Braille from an Arabic Braille Press in Hashemite Jordan, and of presenting them to schools for the blind and leading blind mullahs as a gift from the American Foundation for Overseas Blind. The Braille was so closely akin to the new Urdu Braille of Pakistan that it could be read immediately by blind Pakistanis. The blind Pakistani is fond, too, of Persian poetry and will be delighted when Persia has her own Braille press and publishes these works in International Iranian Braille.

The two and a half years I was with UNESCO were entirely taken up with the solution of orthographic Braille problems in five continents; but with their end UNESCO bequeathed the continuation of the task to the World Braille Council, a small body to which I was nominated Chairman. Much work remained to be done, not only in

getting the new International Braille systems adopted, but also in other fields of Braille where disunity persisted, notably in musc notation and mathematical and chemical symbols.

Louis Braille was an intelligent pupil of the first school for the blind in the world, that was founded in Paris in 1782. He became both an organist and a Professor of Mathematics at the School, and naturally he commanded the services of his six dots so that they could adequately represent these subjects as well as orthography. In the course of their spread, however, divergencies have also grown up.

In Paris in 1954, under the joint auspices of UNESCO and of the World Council for the Welfare of the Blind, we held our International Conference on Braille Music Notation. A new International Manual has been published which has led to an improvement in International uniformity, but not yet to the degree anticipated. Nevertheless, negotiations continue in the hopes of gaining more complete agreement. During 1959 at the W.C.W.B. Conference in Rome (which now has totally succeeded UNESCO as our old parent body) it was agreed that the study of mathematical and chemical symbols should be proceeded with, this task to be in the hands of Professor Pierre Henri, himself blind and the ultimate successor of Louis Braille in the same post in the same school in Paris —Institution Nationale des Jeunes Aveugles.

The adaptation of African languages to International Braille, when reference is made to the International Phonetic Alphabet and the special Table of Braille Signs for African Languages, contained in the UNESCO publication, "World Braille Usage", presents no real difficulty. The Committee on Bantu Languages is engaged at this moment in planning alphabets for four South African languages and similar work is under way in Central, East and West Africa. The problems arising from the publication of several forms of Spanish contracted Braille in Latin-America have also been solved ; and thus the excellent work, undertaken by UNESCO, has yielded and is still yielding rich results in all three departments of Braille.

THE GULF IS VANISHING

by Pierre Henri

"THE blind need more than knowledge or university degrees if they are to have equal chances in the world of those who can see... A hundred years ago it was a great achievement to be able to teach a sightless person how to read, write, count and to provide him with a minimum of general knowledge. Today it means very little."

When I wrote this in an article for THE UNESCO COURIER (The Blind are Achieving a Fuller Rôle in Everyday Life—March, 1952) I was, in no way asserting—as has since been said—that it is pointless to educate the blind. To have upheld such a viewpoint would have been absurd. In a world where educated men and women are striving to bring the benefits of education to those who have so far been deprived of them, it is inconceivable that one group of human beings—the blind—should be ignored.

Furthermore, anyone who is deprived in some measure of his physical or sensorial powers must make greater demands on his intellect to compensate for what he lacks. Even the sighted person sees as much with his mind as with his eyes. But where the sighted person perceives, the blind one must learn to understand and to familiarize himself with what he cannot see: the implements he uses, his home and his town. He has to use his imagination and create a mental picture of so many things. If John Locke the English philsopher called for "a sound mind in a sound body," we might in the present context affirm that "the less sound the body the greater the need for a sound mind."

If the personality is deprived through an infirmity of one of its elements, frustration is likely to occur. Unless there is some form of compensation, sightlessness tends to cause an imbalance. Education provides just such a compensation: by widening vision through the mind it acts as a safety valve, prevents the development of frustrations and reduces the danger of inner emotional conflicts.

A man does not live in a vacuum, however, nor act by and for himself alone. He is an integral part of an entity where physical world, social universe and individual self come togelther. From this viewpoint, education offers to the blind person a way to restore himself in the eyes of other men and thus, as it were, in his own eyes. Thus the feeling that it will compensate for their reduced physical state stimulates the hunger of the disabled for education.

It is in this respect that the Braille system, that indispensable tool of learning which helps the blind to equality with other men, has proved its worth. It was, in fact, regarded at one time as a cure-all, as the answer to the most difficult problem in the rehabilitation of the blind. But whereas the development of intelligence and the acquisition of knowledge are certainly useful elements in this process of rehabilitation, they are by no means the only ones.

The American psychologist, Thomas Cutsforth, himself blind, advanced views in a study published in 1933 which rather shocked people at the time, but which are generally accepted today. Cutsworth argued that, no matter at what age it occurs, blindness immediately begins to shape the personality in direct relation to the fact of sightlessness. This is perhaps most apparent to the ordinary person in a physical way. We have only to think of the peculiarities of stance or gesture which are exhibited by some blind people. They are so completely related to blindness as to be known as "blindisms."

The uninformed person would regard these as nervous tics caused by blindness. They are in fact, usually fixed habits, mostly acquired in very early childhood: a display of hostility to the physical world (head thrown back, forearms held horizontally with hands hanging down, walking on the heels with toes raised and feet apart); photophobia (head held down); muscular activity designed to compensate for a sedentary existence (movements of the

CONT'D ON PAGE 31

Pierre Henri is Vice-Chairman of the World Braille Council, created under Unesco's auspices, and is professor at the National Institution of the Young Blind, Paris.

BLIND COUPLE RAISES A FAMILY

Leading a happy family life in spite of blindness has been the achievement of Mr. and Mrs. James DiBiase of New York City. They play with their children, Janet and Billy, have family outings and are busy keeping up their modest but pleasant home. With so many interests, they have no time for self-pity. Marjorie DiBiase does her own housework, and Jimmy DiBiase has three jobs, running his news-stand in the daytime, teaching music at the Brooklyn Industrial School for the Blind in the evening, and playing the piano in cafés during weekends. Marjorie, a vivacious, cheerful woman, lost her sight when she was nine years old; Jimmy was only two when blindness struck him. Both their children have normal vision. A stranger, watching the group gathering around the piano (left) would never realize that two were sightless. "There are just a few things we do differently from other people," says Marjorie "If the children want us to see something, they have to put our hands on it. They accept this as natural, because they grew up with it."

USIS

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'DO-IT-YOURSELF' STARTS EARLY

Among children under five only seven in every 100,000 are blind whereas the proportion of blind people in the world as a whole is nearer 350 for every 100,000 inhabitants. Thus most blind children have had sight at some time and benefit from a visual memory which is a definite aid to education. In many countries this education is given in special classes or special schools but as far as possible it follows the lines of that given to sighted children. Today many thousands of the young sightless are learning to step out without fear, to play and work with the seeing and to surmount their disability. Above, reading a Braille book in a U.S. school; left, young cooks in the making at an English school; right, learning to clamber about fearlessly on these bars is part of the experience of living, studying and playing together which all children, sightless or sighted, should have.

USIS

The blind in the U.S.S.R.

OUT OF THE DARKNESS

by A. Kondratov

Deputy Chairman, All-Russian Society of the Blind

THE 1897 census in Russia recorded 250,000 blind persons. They lived mostly in regions inhabited by national minorities with low living and cultural standards and where infectious diseases (trachoma, smallpox, blennorrhoea) were prevalent.

The majority of the blind then lived on a miserable pittance granted them by charities or on alms from the public. In the whole of Russia there was only one crafts centre for the blind (in St. Petersburg) where a few dozen persons were employed making brushes and weaving baskets, though small groups of blind persons were also employed in the workshops of the Moscow, Smolensk, Samara and Kostroma Schools for the Blind.

In 1925 the All-Russian Society of the Blind was founded as a voluntary association of blind citizens in order to integrate the blind into society. Somewhat later, similar societies were founded in each of the Soviet Republics.

To obtain funds the Society opened shops and dining-rooms, barbers' shops and shooting galleries, organized collections in offices and factories and arranged lotteries and concerts. Work was found for individuals and for small groups of blind persons in co-operatives for invalids and in factories and offices. It soon became apparent that it would be more useful to open special workshop schools for the blind. The earliest of these were simple little workshops of the cottage industry type where brushes, baskets and felt boots were made.

Today, all workshop schools are under the management of the Society of the Blind which runs 268 such institutions. In 1960 these will produce a variety of articles valued at approximately 1,700 million roubles.

The past seven years have seen the transition from the traditional types of manual labour for the blind to work in highly mechanized factories where complicated techniques are used. The Society's Moscow factories fill government orders for a wide range of articles, including luminescent lamp regulators, electric motors, spare parts for seed drills, and electrical equipment; Leningrad factories turn out low-voltage transformers and conveyor belts for reaping machines; a Chelyabinsk factory makes cushioned seats for tractors, and a Gorky factory produces air filters for motor vehicles (nylon and metal). Other items produced by the blind are coarse and fine filters for oil and diesel engine fuel, signalling apparatus for mines, cardboard boxes of all types, electronic apparatus, mechanics' tools, spare parts for motor vehicles, tractors and combine harvesters and plastic articles.

The workshop schools accept people who have lost their sight at a mature age and have to change their occupation, as well as young people who have graduated from the state secondary schools for the blind.

The type of school workshop, is selected with a view to employing, as far as possible, only blind persons; the equipment, its arrangement, safety precautions, etc., are all adapted to the work of blind persons. Only those operations beyond the scope of the blind are performed by sighted workers; as a rule their number (including clerks and specialists) does not exceed 33% of the total number of employees.

The usual shields and guards over moving parts of machines that are considered adequate for sighted workers are quite inadequate when the machines are operated by blind persons. Die presses operated by the blind must be fully enclosed though this is not necessary for sighted workers. Factories, and even many co-operative workshops employing invalids, do not find it necessary to break up production processes into a number of single operations, but where the blind are employed this is absolutely essential. Blind workers also need automatic stopping devices, sound signalling systems and magnetic switches in place of knife switches.

In the Soviet Union, factories employing blind persons are run at a profit. In 1959 total profits amounted to 306 million roubles all of which was used to improve the

BLIND CHILDREN LEARN TO DRAW

Drawing lessons for blind children sound just as strange as music lessons for the deaf. Yet various methods which make this possible have been devised in different countries. A graphic system of teaching known as "typhlography" is employed in Russian schools for blind children, for example, and enables them to think in terms of space, to develop their spatial imagination and to draw objects on paper as they "see" them. The process includes the use of easily-made and easy-to-understand outlines of objects such as the icebreaker (far left). Different sides of the object are shown so that when these are combined (details of the icebreaker's deck are shown below side view) the child has a good idea of the complete object, even when it has a complicated form. Typhlography goes much further than simple drawings and identification. It can teach sightless students such skills as geometrical diagrams and projections and industrial design. As in all modern schools for blind children, the methods used here follow as closely as possible those of equivalent grade schools for the sighted. The result is a development of character and behaviour patterns that include the fun and satisfaction of teasing a schoolmate by giving a tug at her plait as she climbs the stairs. (left).

Photos E. Don

working and living conditions of blind persons and to provide for holidays and medical treatment. This income enables the society to carry out all its activities and to expand its operations without government subsidies.

The law on universal compulsory seven-year education applies equally to the blind and the state provides special schools in which the blind are given a normal education. Children receive a general education and new methods, employing relief models, make up for the lack of visual aids to teaching; the syllabus is fully comparable to that of the ordinary schools.

In the Russian Federation of the U.S.S.R. there are 62 boarding schools for blind children, 11 evening schools for young workers and three inter-regional, correspondence schools providing a full secondary education without loss of working time. School graduates may continue their education or engage in some productive work.

In recent years particular attention has been paid to the technical side of education. Workshops are being opened at schools where pupils work at cardboard-box making and at die presses, do mechanics' jobs and woodworking and make brushes. In addition to technical training and production practice in the school workshops the pupils of some schools get extra practical training in factories belonging to the Society of the Blind. When a blind person is graduated from a secondary school he has, in addition to his general education, learned some trade.

There are several hundred blind persons among the students of Soviet schools of higher learning. Their state scholarship grants are 50% higher than those of sighted students which enables them to hire readers. There are blind barristers, blind schoolteachers and blind lecturers in colleges. At Moscow University alone there are nine blind professors and lecturers.

There are 1,500 various kinds of libraries for blind people with 824,000 books printed in Braille. From 275 to 350 titles of books are printed annually. The Societies publish several periodicals in Braille. The monthly "Life of the Blind" has a circulation of 12,000.

Persons invalided by blindness enjoy considerable privileges. They do not pay income tax. They work only six hours a day and have longer annual holidays than sighted workers. They do not pay fares on city transport. The blind are also granted pensions on favourable terms. A youth of 21 (blind from childhood) would be granted a pension of 85% of his month's wages up to 500 roubles and 10% on all over 500 roubles, plus 15% for nursing; the pension is payable in addition to wages. Old age pensions are also higher. A blind woman is entitled to an old-age pension at the age of 40 provided she has worked for ten years; a blind man who has worked for 15 years is entitled to an old-age pension at the age of 50.

The public health bodies carry out a periodical examination of all blind persons to check up on the possibility of treatment or for the provision of artificial eyes; they also render therapeutic or other medical assistance. In Pyatigorsk there is a special sanatorium for the blind.

Year by year the working and living conditions of the blind improve. This year the All-Russian Society of the Blind plans to spend some 142 million roubles on building. As a general rule factories, houses, clubs, schools, kindergartens and nurseries are built on a single lot, as one big complex. This allows for the concentration of the blind and provides better conditions for the organization of their leisure.

Pre-revolutionary statistics registered only those persons who were totally blind but the present system of recording regards as blind those whose better eye has a visual acuity of 8 % or less (with correction) or with a diminished field of vision up to 10 degrees.

In the Russian Federation there are 97,900 persons who

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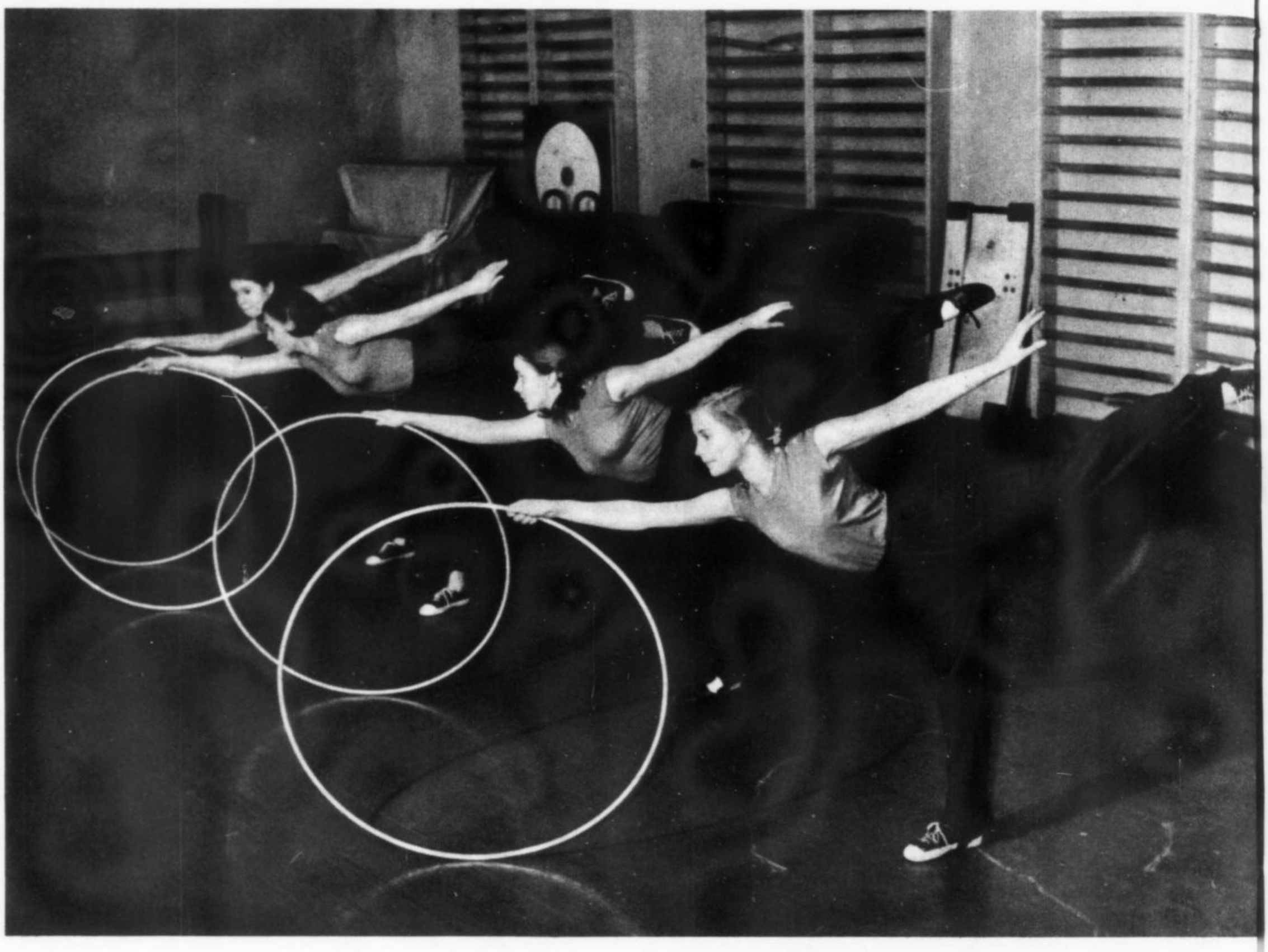


are classified as first category invalids (i. e., helpless invalids) on account of loss of sight; they include the totally blind, those with a visual acuity of less than 4 % with correction and aged persons whose weak vision is due to senility.

The All-Russian Society of the Blind also has on its books about 68,000 persons with imperfect sight. They have a visual acuity of more than 4 % but are granted the same privileges as the totally blind and are given employment in the Society's factories or in invalid co-operatives; some of them are also found employment in ordinary factories.

STATISTICS for the past forty years show that the number of totally blind adults has been reduced to one third of the former figure and the number of totally blind children to one fifth. In view of this the question of reducing the number of schools for the blind has been raised. Greater attention is being paid to the establishment of interregional boarding schools. It is planned to set up separate schools for blind children and for those with impaired vision; the latter will employ special visual teaching aids and suitable optical devices and lighting. In this field there is still much to be done.

The initiative of THE UNESCO COURIER in devoting a special issue to the problems confronting the blind throughout the world will draw the attention of the general public to those problems and result in greater contact between Societies of the Blind in different countries, a pooling of their experience and an extension of their work.

Official Soviet photos

WORLD AT THEIR FINGERTIPS. Boys and girls in a Soviet school for the blind follow a geography lesson with the aid of special globes on which the features stand out in relief. Top photo, members of the sports club do special exercises which help to develop poise and balance.

DO'S & DON'TS FOR THE SIGHTED

by F. Potter

ONE of the greatest causes of depression, frustration—and sometimes of acute pain—to the blind is the attitude of other people towards them. One naturally feels sympathetic towards anyone who is handicapped by blindness, and one is anxious to render him assistance whenever possible; but the manner in which that help is given can make a great deal of difference in the effect produced.

It can make the blind person feel that he is still just like other people except for his lack of sight, or it can make him feel that he is a helpless encumbrance, and the person who has only recently been deprived of his sight is particularly vulnerable. Here are a few suggestions for giving aid in the manner in which it will be most appreciated.

● When a blind person is seen standing near the edge of a pavement, it is very likely that he wishes to cross the road. But anyone wishing to help should not just take his arm and try to lead him across without a word; he may be waiting there for a friend. "Can I help you?", will cover the situation quite adequately. If, however, he has decided to attempt the crossing unaided—which may eventually happen if he has waited unsuccessfully for assistance for a long time—do not stop him in "mid-stream" to ask whether he needs your help, for then the strain of trying to concentrate his attention on the traffic sounds all around him and of answering your question at the same time is very great. Just take his arm and lead him to safety, parting from him with a "you are all right now", or "you have just crossed... street". And don't forget to give warning of kerbs and steps—"step up", or "step down".

● Some good folk, when leading a blind person, seize his arm in a vice-like grasp and try to hoist it up to shoulder level. (Such over-anxiety to render maximum assistance has sometimes even resulted in the man being lifted almost bodily on to a bus.) A light grip on the arm with firm pressures for directional guidance and verbal instructions regarding steps are all that are really necessary, and do not cause the person to feel clumsy and awkward. After you help him across a street, it is unlikely that he will ask you to accompany him further, thereby causing you inconvenience. The fact that he is out alone will indicate that he is quite able to go on his way unaided, requiring assistance only when crossing busy roads.

Don't lift him bodily on to the bus

● It is obviously very desirable for a sightless person to carry a white stick in the street—primarily as a means of mobility, and also to make clear his incapacity and need of assistance under certain conditions. Yet many blind people feel that it is degrading to carry such a stick because of the exaggerated pity which it evokes in the minds of the sighted. Such half-whispered remarks (which are usually clearly heard by the blind) as, "Look at that poor blind man! How terrible!" are often the cause of the man never carrying a white stick again.

● A visually handicapped person sometimes finds it difficult in a crowded room to know exactly when he is being addressed, especially if the speaker is some distance from him. Under such circumstances, confusion and embarrassment are avoided by the use of his name when opening a conversation.

● Never "talk over" him to his guide, as he would much prefer to speak for himself.

Don't assume all the blind have keen hearing

● There are a number of fairly widespread misconceptions about the blind which might usefully be corrected. The most common one is that blind people have unusually keen hearing. This belief is particularly fallacious in western countries where the great majority of the sightless become blind after the age of fifty—50 per cent after sixty. Thus, for physiological reasons, most blind people are not likely to have a more acute sense of hearing than the average sighted person with normal hearing. However, lacking sight, the visually handicapped are obliged to make greater use of other senses, and are thus able to concentrate their whole attention on what they hear and smell so as to gain information about their surroundings. An "observant" blind person can learn quite a lot about a stranger from his footsteps, his breathing, his handshake, and, of course, his voice, manner of speaking, and laugh.

● It is also erroneous to think that most blind people read Braille. Because of the relatively high incidence of blindness after the age of fifty, the majority of blind people are unable to cultivate a sufficiently sensitive touch to read Braille with any great fluency, and this has led to the development of the "Talking Book" (recorded on discs) which is increasing in popularity as reproducing apparatus becomes cheaper. The Braille system is easily memorized, but the cultivation of a sensitive touch usually takes many months or even years.

● Music in all its forms is obviously a potential source of great pleasure to the blind, but it is certainly not true to say that all blind people are musicians or even enjoy music. If a man is tone-deaf before he loses his sight, he remains tone-deaf afterwards. In short, generalizations about the blind are just as misleading as those sometimes applied to races and nations.

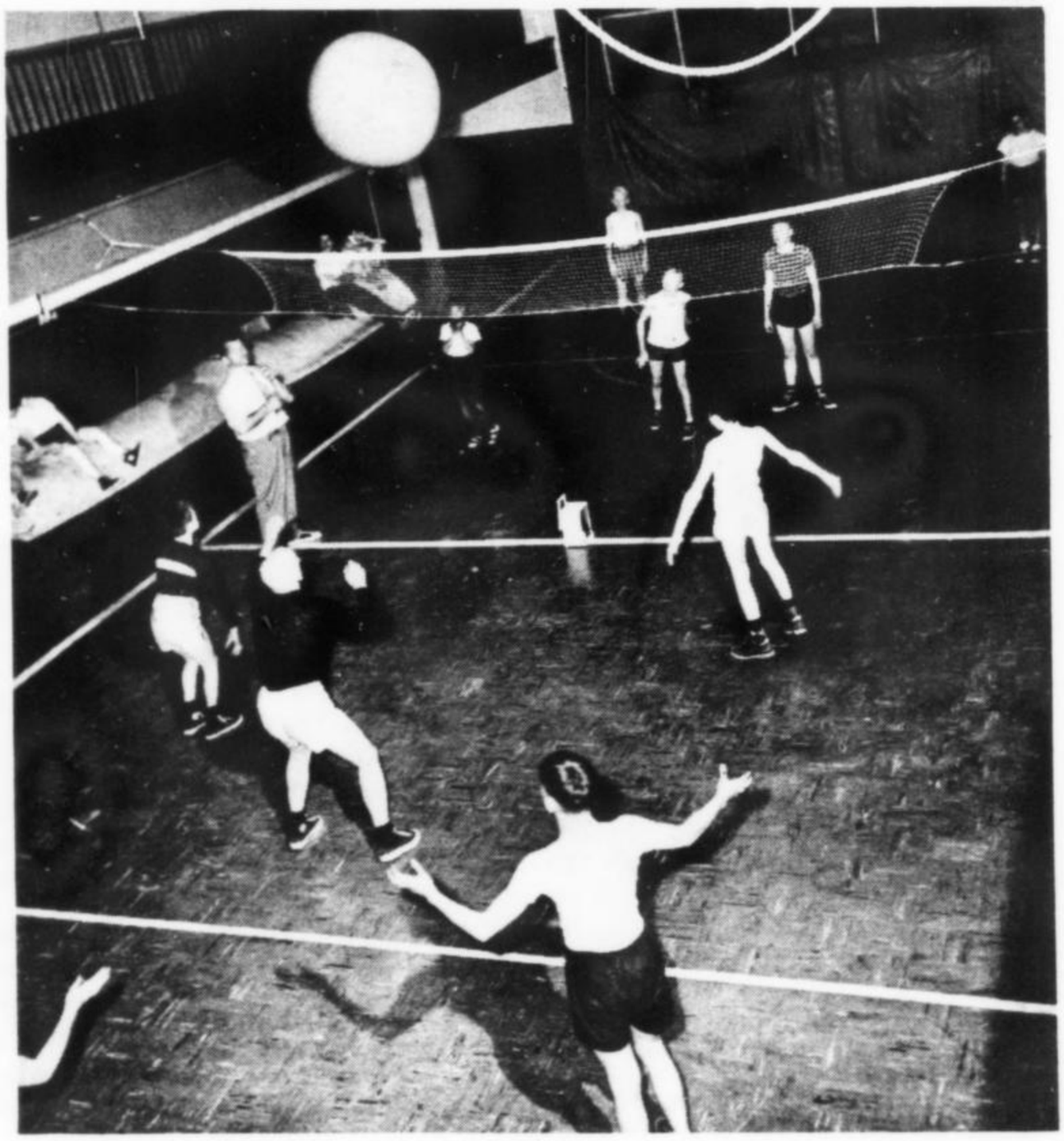
● Broadly speaking, one should treat blind people as perfectly normal individuals who happen to be without sight but who are in complete possession of all other faculties. If, in a moment of forgetfulness, you were to ask a blind man what he thought of your new shoes, he would be very amused and feel himself complimented.

Fred Potter, who is blind, is a member of Unesco's secretarial staff.

Photo Ray Manley © Camera Press Ltd., London

USIS

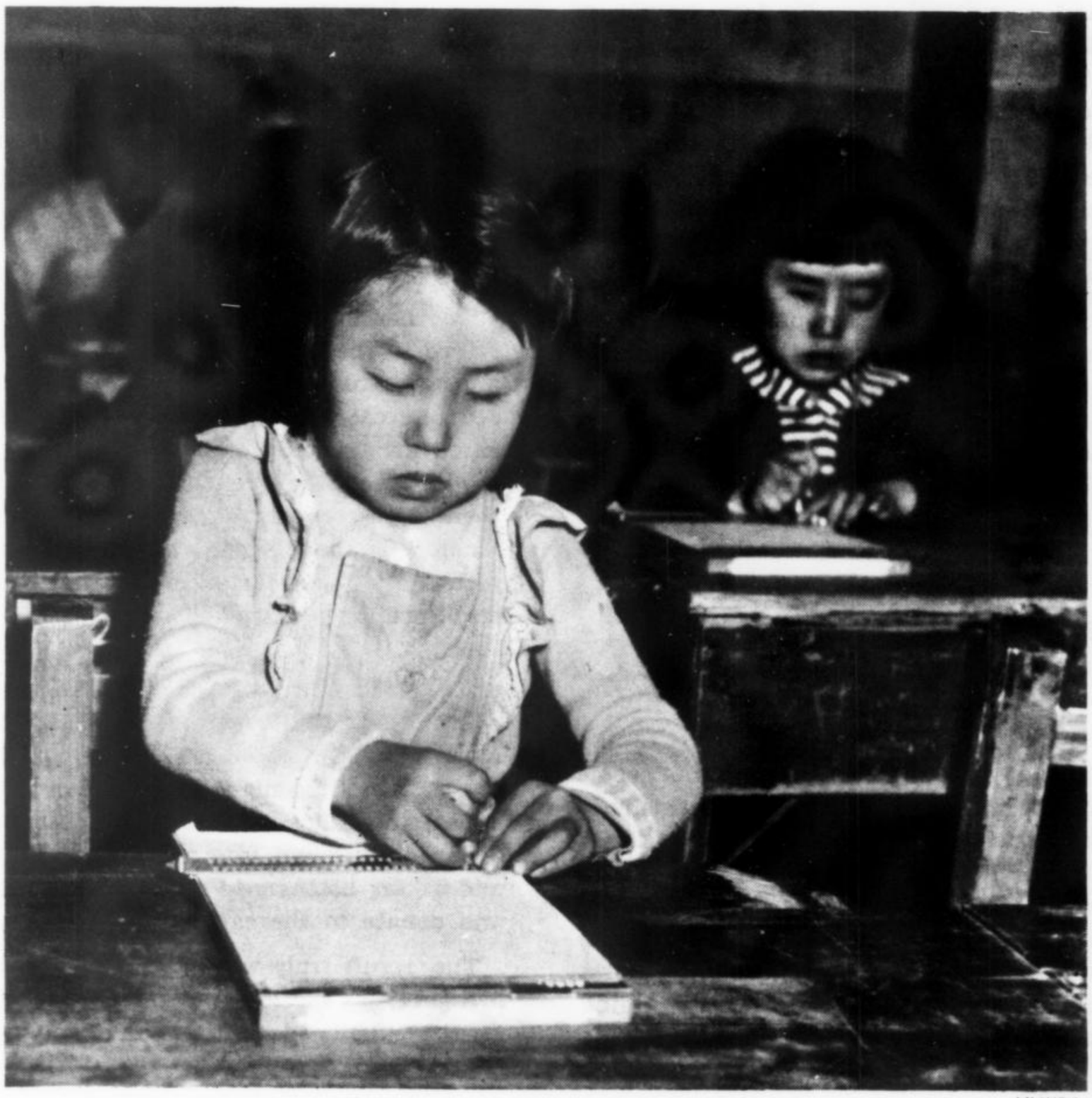
All the volley ball players here are blind



A game of volley ball in progress at the New York Institute for the Education of the Blind. The large soft ball wouldn't hurt even if it hit a boy on the head. In the centre of the court under the net is a metronome which helps the boys to judge their distance from the centre line. Athletics are very much open to the blind. At the Arizona State School for the Deaf and Blind, members of a group of wrestlers pair off and practise some handstands (above) to get themselves in top condition. Athletics at the School include running and cycling (deaf and sightless students ride together on tandem bicycles).

French scouts & Unesco Clubs chalk up a success

FIFTEEN MILLION FRANCS OVERNIGHT



UNKRA

YOUNG KOREAN ORPHAN in the National School for the Blind at Seoul writes with one of the special Braille plates supplied to the school through Unesco's Gift Coupon Programme. Other Korean schools for the blind received help through the same programme which for the past ten years has made possible a person-to-person international aid, with individuals and groups in 14 countries raising funds to help pay for worthwhile educational projects in other lands. Braille plates for the Seoul school were paid for by donors in U.S.A. and England.

NEVER in the 10-year history of UNESCO's Gift Coupon Programme has there been a campaign as dramatic and instantaneously successful as the unique nationwide public appeal launched last November in France for funds to assist schools for the blind in various parts of the world.

Sponsored by the French National Commission for UNESCO and conducted by the French Federation of UNESCO Clubs, with the aid of Boy Scouts' organizations, the campaign was sparked by a radio broadcast on the night of November 24. Before morning, over 15 million francs ($30,000) had been collected from all over France.

Equal to the monetary success, which virtually wiped out the most urgent needs for educational equipment of five institutions for the blind on UNESCO's Gift Coupon project list, was the campaign's effectiveness in acquainting a widespread audience with UNESCO's overall efforts to spur educational development, not only for the blind, but for all people everywhere.

The Gift Coupon Programme has for ten years been a popular vehicle for just such focussing of public attention on problems in education throughout the world, as well as for enlisting individual co-operation in working to solve them. Designed at first to help reconstruct schools and school systems destroyed or neglected during the war, the programme has since been extended to include educational institutions of all kinds on its project list: schools, of course, community centres and development

CONT'D ON NEXT PAGE

FIFTEEN MILLION FRANCS OVERNIGHT

(Continued)

MORE THAN 400 UNESCO CLUBS GO INTO ACTION

projects, technical institutes, libraries, co-operative training groups, rehabilitation centres, women's and youth organizations and many others. To-day, people of 14 countries in Europe and North America are taking part in this person-to-person international aid by working through their organizations to raise funds, buy the UNESCO-issued Gift Coupons and then send them to the project they select. Recipients use the coupons as a sort of international "money order" to buy the needed educational equipment from any supplier, who sends the coupons to UNESCO for redemption.

The organizers of the French campaign chose their theme—"Aid for the World's Blind"—to commemorate the 150th anniversary of the birth of Louis Braille, inventor of the system of writing which bears his name, and also to mark the 10th anniversary of the world uniformisation of the Braille notation system under UNESCO's auspices.

Person-to-person aid goes to Ghana and Indonesia

ALTHOUGH it is more than a century since the Braille alphabet was invented, most of the blind people throughout the world still lead the same existence as those in the Middle Ages. They are beggars, fortune-tellers, street-singers. The Braille alphabet has indeed been adapted to nearly all languages, but in many countries there is not a single library of works in Braille and there are far too few specialized instructors. Africa and Asia, which have the highest proportion of blind persons, particularly lack teachers and equipment.

With these stark facts in mind, the French UNESCO Clubs set out to collect enough money to buy all the Braille books and supplies, all the musical instruments, all the physical training equipment and all the arts and crafts materials listed as vitally needed items by the institutions for the blind among UNESCO's projects.

One of these is the school at Akropong in Ghana, which started in 1946 when Church of Scotland missionaries took three blind children into their care and began to instruct them in Braille. Today, with some 50 sightless pupils, the school has grown into a pioneering model centre for blind training in Ghana, among whose 4 million inhabitants there are some 50,000 blind persons.

The perfection and extension of instructional techniques in an Indonesian institution will also be assisted as a result of the campaign. The Foundation for Rehabilitation of the Blind in Semarang, the capital city of Central Java where the number of blind is estimated at more than 100,000 persons, has established in its home and school a comprehensive training programme.

Similar institutions in Ceylon, Iran and Tunisia complete the group of projects benefitting from the French campaign, which from the outset was original in planning and efficient in execution. The whole effort was designed to generate widespread interest prior to the radio broadcast in November.

First, the more than 400 UNESCO clubs participating organized action on the local level. Press articles on the life and career of Louis Braille, on problems of the blind, on the projects to be aided and other promotion literature were appropriately distributed. A central point, usually the town hall, for the collection of funds was selected. Co-operation of local scout groups was arranged to man these booths on the night of the broadcast.

Another innovation was the plan to offer a postcard-record to the first 100,000 donors responding to the radio appeal. This card featured an original design by artist Jean Lurçat and a recording of a traditional Christmas carol, arranged by organist Jean Langlais and sung by the choir of the French Institute for the Blind. Since then, 25,000 copies of this postcard-record have been ordered by the German National Commission for UNESCO with the idea of starting a similar campaign in the Federal Republic of Germany.

Pre-campaign publicity did not speak of fund-raising or the exact nature of the programme to be carried out on the night of November 24 during the popular broadcast "Vous êtes formidables" over radio station "Europe N° 1". On that night radio personalities launched the appeal to millions of listeners, describing the projects, giving background information on UNESCO and its work, and asking listeners to go to the central collection points and donate to the cause.

The result truly was "formidable". Blind persons in five countries will long be grateful to the people of France for this singular demonstration of good will.

MATERIALS FOR THE BLIND GRANTED FREE ENTRY

UNDER its programme to promote the free flow of information between countries, UNESCO works for the elimination of import duties and postal charges on information materials needed by the blind.

Duty-free entry for books and other publications in Braille is granted under the UNESCO-sponsored Agreement on the Importation of Educational, Scientific and Cultural Materials, now applied by 32 countries. These countries also grant free entry to other educational, scientific or cultural materials if consigned to approved institutions, and provide import licences and foreign exchange for all materials for the blind.

Acting on a proposal inspired by UNESCO, the Universal Postal Union decided in 1952 to allow publications for the blind to be mailed abroad post-free. In an appeal to Member States, UNESCO asked governments to apply this concession liberally and to exempt such publications from internal postal charges as well. A number of countries have since granted these concessions.

Photo © Pierre Baudin - Association Valentin Haüy, Paris

THE ANATOMY LESSON is an important element in the training of a masseur. Here, at the training centre of the Valentin Haüy Association in Paris, two blind students (on left) study the formation of the human skeleton while a blind instructor gives other students a lesson in the technique of massage. Blind people have increasingly shown themselves to be adept at this work.

LET'S STOP PLAYING BLIND MAN'S REBUFF

by Léon Bataille

"THE BLIND?" —"Useless members of the community." "Unless a blind person has a streak of genius, he should steer clear of intellectual pursuits." These two opinions were recorded during a recent inquiry in France where a cross section of all classes and ages was asked for its views on the place of the blind in society.

Such negative views were by no means isolated ones, even in the country of Louis Braille and of Valentin Haüy, the great pioneer in the field of social rehabilitation for the blind. The enquiry showed too that even people with good educational backgrounds viewed blindness as an affliction which condemns its victims to a life of apathy. Most people seemed to think that work could never be anything more than a pastime for the blind, a kind of consolation or simply something to distract them from their infirmity.

But there are others in the world who think differently. Henry Ford, the American automobile magnate, renowned for his practical common sense, wrote in his autobiography:

"The subdivision of industry opens places that can be filled by practically anyone. There are more places in subdivision industry that can be filled by blind men than there are blind men. And in each of these places the man who shortsightedly might be considered an object of charity can earn just as adequate a living as the keenest and most able-bodied. Industry organized for service removes the need for philanthropy."

What about the blind themselves? What do they think? In their minds there are no doubts whatever. To them work is something far more important than a means of gaining a livelihood. It is no mere chance that Article 2 of the Universal Declaration of Human Rights—"everyone has the right to work, to free choice of employment"—is so often quoted by speakers at the international conferences of the blind.

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LETS STOP PLAYING BLIND MAN'S REBUFF

(CONT'D)

As Pierre Henri, professor at the National Institution for the Young Blind, in Paris, has expressed it: "The desire to be useful, to lose the feeling of being a burden on others, to earn their living 'like other people' is, in the case of the blind, no mere wish; it is an aspiration, an obsession."

History may well be studded with the names of blind men who achieved fame through their talent or genius, but the *right* of all blind men to work is a comparatively new conception.

Since 1945 most of the European countries and those of North America have taken steps to assist the social and occupational rehabilitation of their blind citizens though the resources brought to this task are widely divergent as also are the methods used and results achieved. Some countries consider they have solved the problem by granting pensions to the blind. Others feel it is enough to provide educational and entertainment facilities. Most, however, have tried to help the blind to equip themselves for a gainful occupation, and to find jobs.

Higher productivity & lower accident rates

For far too long the only possibility open to the blind was to enter some restricted, overcrowded profession such as piano-tuning or playing in an orchestra; more recently they have been able to take up massage. All that most of them have been taught, however, are jobs like making brushes or re-seating cane chairs despite the fact that there are more and more jobs in industry and business which could be adequately filled by blind people.

The experience of business and industrial concerns in, among other countries, France, Great Britain, Canada, the Soviet Union, Denmark and the United States, shows beyond doubt that the blind are capable of performing a wide variety of jobs, including complicated ones, provided production methods are suitably adapted and simplified. They are conscientious workers and their productivity is equal to or even higher than that of equivalent sighted workers, especially when they have been given a thorough training. Moreover, man for man, they have fewer accidents at work since their blindness makes them take special care. Finally, employers have been amazed by the psychological effects of

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JUST LIKE ANY OTHER FACTORY

At the Saurma factory in the Paris suburb of Suresnes there is the hustle and bustle typical of any busy factory. Here men are unloading raw materials from a truck; there a woman fills cartons with tins of floor polish while across from her a man packs soap tablets into boxes. At bench and machine, men and women work swiftly and deftly. Yet most of these workers are blind and the rest are deaf and dumb. There is only one unhandicapped person—the foreman.

In this factory which turns out soap and household cleaning products, the skills and capabilities of blind and other handicapped people are used to the full. The enterprise has four aims: to turn people into qualified workers after only a few weeks' training; to provide gainful employment for the physically handicapped; to earn profits which can be used to help blind and other disabled persons; to demonstrate convincingly to employers that they need have no hesitation in taking blind workers on their staffs.

This last goal is certainly the most important. One of the chief obstacles with which blind people have to contend in their struggle to make their way in life is the reluctance of many firms to put them to work.

Thus a factory like the Saurma—a private undertaking and entirely self-supporting—has many useful lessons to offer. All its workers were trained on the spot and their working conditions, salaries and social benefits are, in general, equal or superior to those prevailing for equivalent workers in other factories.

Not only is the factory run at a profit, but the individual productivity of its workers is comparable to that of sighted ones. This was shown when studies were made of such operations as the riveting of openers on tins of floor polish, the moulding of bars of soap and the folding, filling and sealing of their paper packaging.

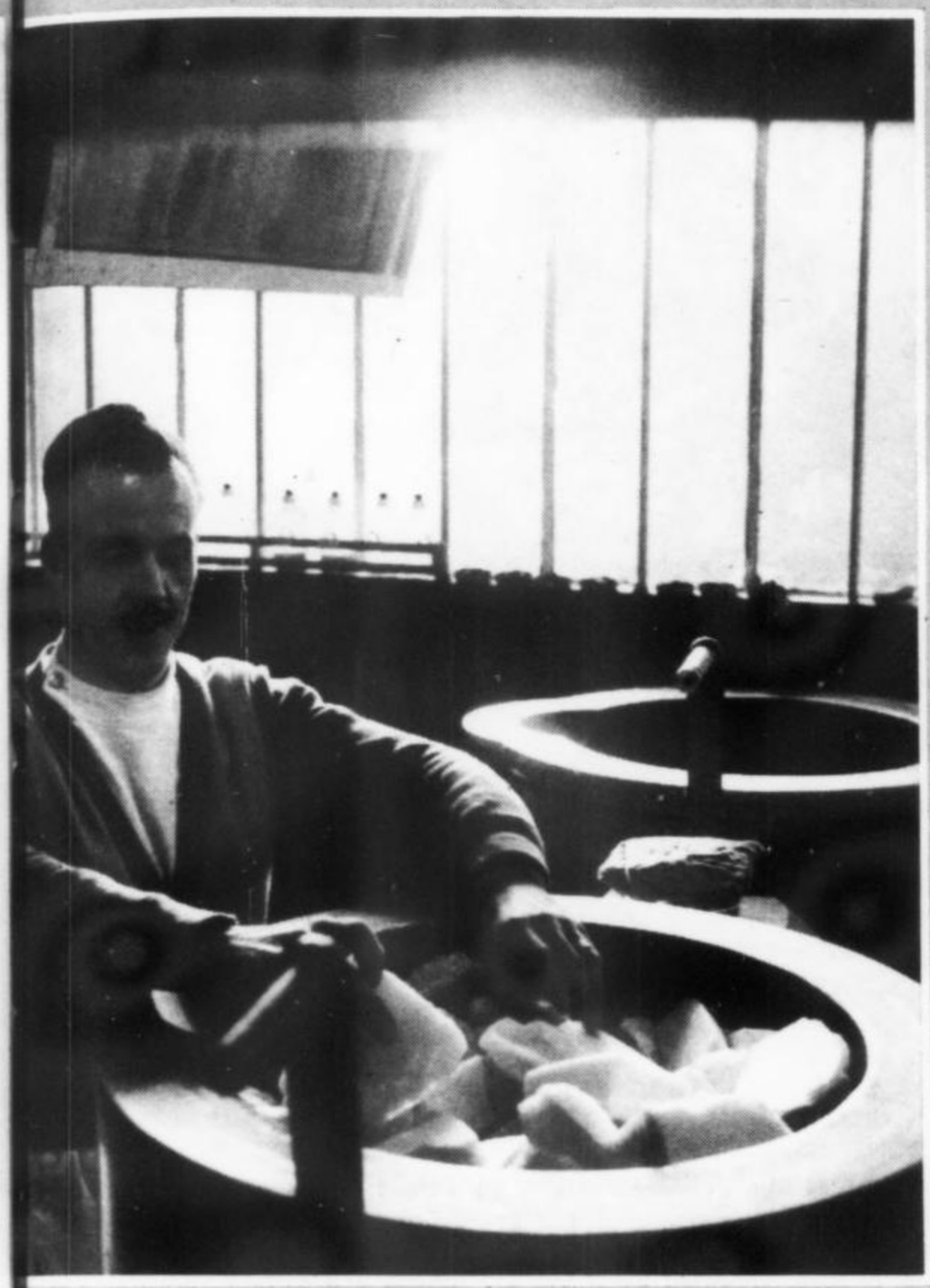
The day when employers realize that blind people, once properly trained, can efficiently carry out jobs in factory, workshop and office, a great step will have been taken towards the full integration of the handicapped into society.

1. Even in the factory laboratory the work is carried out by blind people. Here a worker fills a mixer with the ingredients for making soap. Certain jobs, in the factory—the filling of tins with hot, liquid floor wax, for example —are, however, given to sighted persons (the deaf and dumb).

2. Filling up cans with liquid floor polish from a pump is a job which blind people manage easily after a short period of training.

3. Another kind of work which the blind have no trouble in learning to execute swiftly and efficiently is packaging. Here, a woman worker folds cardboard into the form of a box and packs it with bars of soap.

4. For reasons of security all the machines used by the blind workers are worked by individual hand or foot controls. Thus the operator chooses the moment to work the machine, and at the same time is able to maintain a steady rhythm of production.



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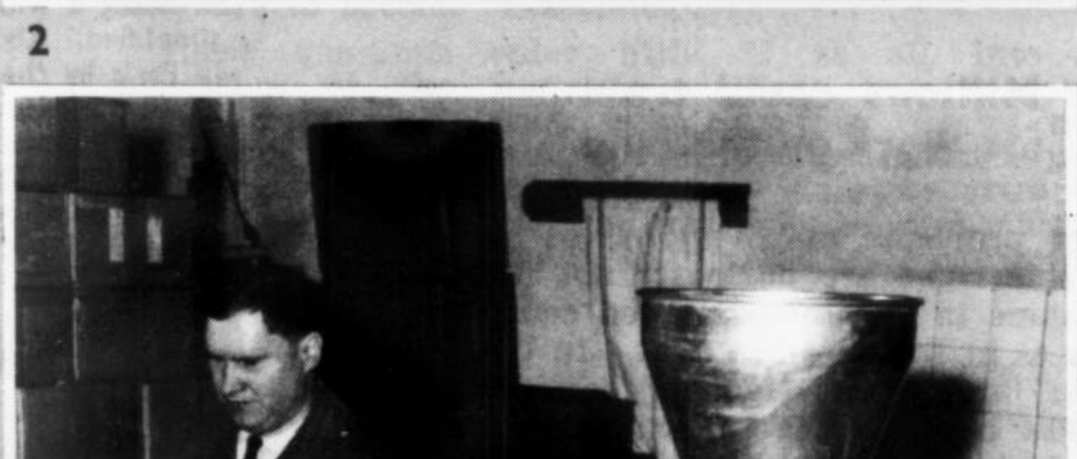

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PHOTOS © ALMASY, PARIS

LETS STOP PLAYING BLIND MAN'S REBUFF

(From page 28)

taking blind persons on their staffs and the spirit of solidarity that grows up between those who can see and those who cannot.

In Great Britain today there are more blind people working in industry than in special workshops or at home. In the United States, which has 98,000 blind people between the ages of 15 and 54, 20,000 are working in industry amongst sighted people. Of the 6,000 blind in Denmark, 10% are in paid employment, either full or part-time. A thousand of the 3,500 blind people in Norway (out of a total population of three and a half million) are employable.

Of the nine and a half million blind people in the world today over seven million live in rural areas and the majority of these in countries now in the throes of economic development. Thus, though the ever increasingly widespread application in the economically developed countries of the right of the blind to work represents a great step forward, this does not mean that the problem in the world as a whole is anywhere near being solved.

Millions could train for work on the land

THE problems of giving effect to this right are obviously not the same in the industrialized countries as in the agrarian ones. In the latter where three-quarters of the world's blind people live, they must be trained for agricultural work, except where industrial development provides some openings.

Today a vast effort is being made in this direction in Africa, Asia and Latin America, with the help both of the United Nations and several of its Specialized Agencies, and of non-governmental organizations such as the World Council for the Welfare of the Blind, the World Veterans Federation and the British Commonwealth Society for the Blind.

Special centres where the blind are trained in agricultural work have been set up with the help of international specialists, and the experiences of the countries which have done a great deal of social and occupational rehabilitation are being adapted and put to use in less advanced regions.

Results naturally vary from one country to another, but in general there is no doubt that for blind people the world over a new era has opened since the end of the Second World War.

TO EARN THEIR LIVING like everyone else is an ardent desire of the blind. For long they were restricted to a few overcrowded professions, but growing experience in business and industrial concerns of many countries has shown that the blind are capable of doing a wide range of jobs provided production methods are suitably adapted and simplified. Above, students learn to use a sewing machine at a special course organized in Paris by the Association Valentin Haüy, which takes it name from the great French pioneer of the rehabilitation of the blind. The women turn out work for hospitals and public institutions in the French capital. Below, in the printing shop run by the same association. The worker on the left is preparing zinc plates for printing Braille books. His left hand reads the Braille text and his right controls the stamping of the characters.

Photos © Pierre Baudin-Association Valentin Haüy, Paris

THE GULF IS VANISHING

(Cont'd from page 17)

PROBING THE PSYCHOLOGY & BEHAVIOUR OF THE BLIND

body or head, hand rubbing, passing spread fingers in front of the eyes in cases where there is still some ability to distinguish light). To the lack of spontaneous imitation can be attributed that facial inexpressiveness which gives young blind people an appearance of precocious maturity and is also responsible for the non-socialization of gestures.

The psychological and psycho-social effects, though unseen, are none the less real. They include a tendency towards an intellectual and social egocentricity which leads the blind person to develop an idea of the world around him and of his relations with others purely in terms of self. They also include an inclination towards excessive verbalism (which is misleading as to actual intellectual endowment), egocentric day-dreaming (which makes up for a decrease in outside activities and opens up a pleasant world which can be shaped at will), motory inertia and an integration with the limited circle of his own kind.

'Voiceless' objects 'speak' through his finger tips

THE effects on character, which are simply the consequences of the above personality traits, are more familiar to those closest to the blind person. They may run from aggressivity to a habitual or systematic withdrawel into a private world, depending on temperament and circumstances, and they open the way to endless disputes.

In reality the picture is not as black as would appear. Here a deliberately pessimistic approach has been taken in order to show the effect produced by a physical handicap when it becomes the dominant element in the development of personality. At the same time it reveals clearly the scope of the efforts which are needed to offset this disturbing influence. Generalizations should be avoided, however, because of various factors that exert their influence.

Firstly, in Occidental countries at least, congenital blindness is rare and even those who become sightless before the age of six or seven—before they have had time to acquire the attitudes of the normally sighted and to absorb a sufficient number of visual images—are a small minority, probably making up less than 5% of the blind people of a given country. And it should be kept in mind that two-thirds of the known blind are over 60 years of age. Thus most blind people have been able to see for most of their lives and have amassed visual images to which they continue to cling.

Secondly there is the vital impulsion which subconsciously brings a person to refuse the idea of being defeated: it pushes the child to explore, to conquer, to master his world and to imitate the sighted people around him. This attitude, above all others, opens the way to freedom for the afflicted from their affliction, and can lead them to the supreme victory of no longer being conscious of it.

Thirdly, and directly related to this; the attitude of those surrounding the blind person must be taken into account. Studies have shown that the development of the young blind person is above all conditioned by that attitude, which is itself governed by the affectivity (or even the neuropathic state) of the parents—especially the mother—rather than by their intellectual capabilities.

It should be clear that we can do more for those "in the shadows" than merely bring them "intellectual light", valuable as this may be. The education of such an individual calls for more than the mere removal of ignorance; it is primarily a question of "normalization", of removing as far as possible the consequences of the "abnormality".

On the physical level this involves repair, the reduction of the ocular results of the malady. If they are to be accepted in a climate which is free of pity and of anything likely to induce an instinctive revulsion, then certain things must be done without delay for the blind person. Certain other physical handicaps are scarcely noticed in the sighted person, but take on a major importance when accompanied by blindness.

Closely related to the foregoing but with an additional intellectual element is the problem of coping with space and the world around. The man with normal vision does not have to learn to move about, nor to use makeshifts (awareness of obstacles, for instance), nor to interpret such fleeting signs as small sounds, subtle smells and vocal inflexions. There is no limit to the number of "voiceless" objects which are therefore not apparent to the sightless person: he must take the initiative and make them "speak" to him through his finger-tips. A whole course of specialized instruction is needed.

The world of people is no less difficult for the sightless than the purely material world. Blindness is the subject of numerous preconceived ideas which are distinctly to the disadvantage of the victim. The sense of inferiority, insecurity, frustrations or inner conflicts induce in the blind "associal" or even "anti-social" reactions. Once again, this calls for a course of emotional training and character moulding which may not involve visible instruction but which is none the less a permanent preoccupation of those concerned with the education or re-education of the sightless. Additionally, there is the question of social conduct, imitation and non-verbal conventions which the normally sighted person acquires, preserves or adapts through spontaneous imitation but which must be induced (or maintained) in the blind unless they are to become "desocialized".

These questions enter little, if at all, into the education of the normally sighted; but for those whose sight is seriously impaired, they are of more importance than grasping some subtle grammatical point or reading the classics, or learning dates or extracting square roots. Of course, the two things are not mutually exclusive, but if a choice must be made there can be only one answer.

Serious danger of creating social & vocational misfits

SINCE we are concerned above all with a work of social rehabilitation, it is as well to stress that this should be based not so much on the subject's background as on the surroundings in which he will eventually live. All educational systems tend to involve a loss of social standing precisely because they seek to "raise up". But where individuals with a normal sensory equipment are concerned, there are so many forms of employment available to them that out-and-out failures are comparatively rare. For the blind, openings are limited and changes of occupation difficult. The school is sometimes responsible for social inadaptability. In western countries where mixing and levelling-out tend to obliterate racial or social differences, this happens only in the sphere of professional activity, as some blind university graduates have found.

The problem becomes of still greater significance when methods of educating or re-educating the physically handicapped, are passed on to economically underdeveloped countries.

There have been missions or other religious groups who, not so long ago, took the blind, young and old alike, from their villages in Asia and Africa; who gave them a European education and then, unable to find employment for them, sent them back home where they were literate in an illiterate society, equipped to do work unrelated to local needs and customs and where sometimes even their traditional religion was no longer acceptable to them.

Nothing could be better calculated to increase the difficulties of the blind and extend the gulf which separates them from society when that society is unprepared to assimilate them.

Letters to the Editor

WAGING WAR ON THE LOCUST

Sir,

The map accompanying the article which you published on the war against locusts (A Desert in the Heart of London) did not include Madagascar where an anti-locust unit does in fact exist. Unfortunately, because the species of Locusta Migratoria Capito which it fights is autochtonal, the unit receives no outside aid although locust invasions sometimes cover as much as two—thirds of the island—an area as large as the whole of France. Today the anti-locust unit is equipped with aircraft specially designed for insecticide spraying operations, and it was certainly the first to use this form of attack just over ten years ago, on January 17, 1950. The decisive action of this service has on many occasions kept famine at bay in Madagascar.

L. Sumaki
Madagascar

FROM A MULTI-RACIAL CLUB

Sir,

Mauritius is a small Island in the middle of the Indian Ocean, and 500 miles from Madagascar, the nearest large land mass. It is very densely populated; about 400,000 persons of Indian, 160,000 of mixed African, Indian and European, 20,000 of Chinese and about 10,000 of European, mainly French, descent. By some curious social process it happens that each of these groups plays a pretty specialised part in our society and economy; in other words we are all dependent upon each other's presence here.

A number of us—to-day about 100—have founded a movement here to maintain and extend our Mauritian unity. We are mainly professionals, and we include doctors, lawyers, priests, engineers, civil servants including senior British civil servants, Cabinet Ministers, merchants and planters; Hindus, Roman Catholics Buddhists, Anglicans and Mohammedans like myself; and people of French, Indian, Chinese, African, English and Scottish origin whose ancestors have lived on the Island for decades or even centuries. We are now flourishing enough and the pressure to join us is great enough for us to think of building a centre at which we can enjoy the freedom of talk, contact and informality which is our object.

A British firm has very kindly and disinterestedly presented us with plans and advice to enable us to build club premises, which will, we hope, possess friendly atmosphere and will provide "neutral" ground on which members of all communities may meet without reserve. Unfortunately the cost of building, about £15,000, is far beyond our means and I hope that any of your readers who share our determination to take positive action to ensure that men and women of goodwill shall not be kept apart by social and racial barriers will help us to assemble some part of this amount.

If so, and if they will write to me in Mauritius or to Mr. G. J. M. Schilling of Blyth, Greene Jourdain and Co. Ltd., Plantation House, Fenchurch Street, London E.C.3, we shall be very happy to acknowledge contributions or to give further information. When the club premises are complete we shall keep on record in a prominent place the names and nationalities of those who helped us to preserve this tiny ocean island from the darkness of racialism.

Abdul Cader Rahman
Chairman, Stella Clavisque Club
Mauritius

MEASURING HIDDEN ICE

Sir,

I found the articles on the ocean depths and on icebergs, by David Gunston in the December number of THE UNESCO COURIER very interesting. May I, however, point out that the proportion of submerged to protruding part of antarctic icebergs was known for some time as seismic determinations of the thickness of ice shelves from which the tubular icebergs are detached had been repeatedly made.

F. Loewe
Dept. of Meteorology
University of Melbourne
Australia

Ed note : David Gunston writes. — "Yes, but the Russian experiment I described was the first successful attempt to test these theories by actually measuring an iceberg in situ."

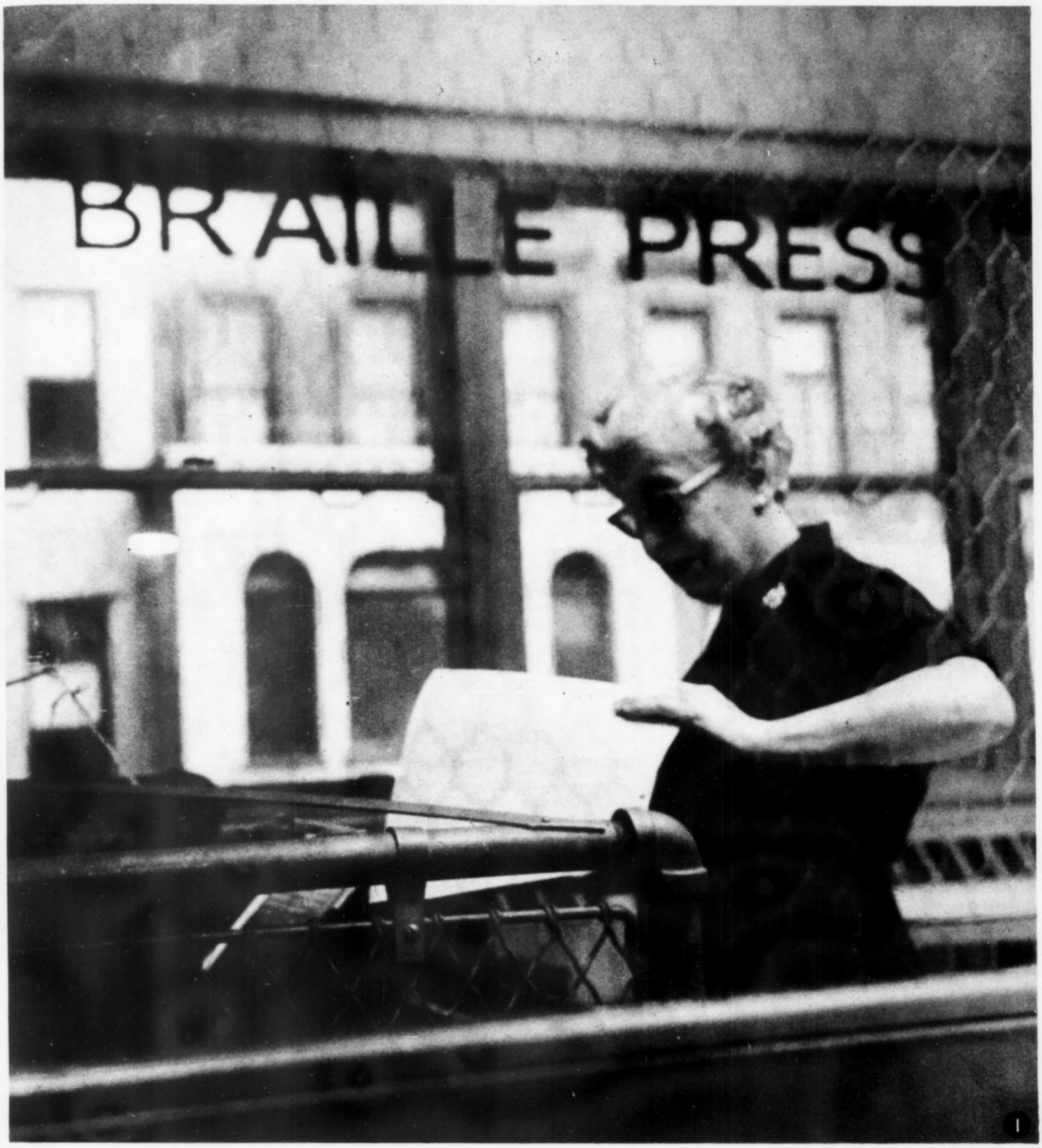
TRIBUTE DUE TO KAREL CAPEK

Sir,

I have just finished reading the issue of THE UNESCO COURIER devoted to Chekhov. I think it is excellent and I want to commend you for it.

May I suggest that a similar issue might well be devoted in the future to Karel Capek, a great Czech author whose writings have an all human focus. It would be a tribute to a man who has not been given his due.

Michael J. Flack
Pittsburgh, U.S.A.



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SEARCHLIGHT FOR SIGHTLESS CHILDREN

Despite blindness and near-total deafness, elderly Helen Day of New York has for most of her life been editor of "The Searchlight" a Braille magazine for blind children issued by The Lighthouse, the New York Association for the Blind. "The Searchlight", now in its fiftieth year, was founded as a 12-page quarterly. Today it averages about 80 pages and is sent free to children ten times a year from September through June. Stories are selected by Miss Day with the help of girl scouts who read material from other magazines to her (2). She selects those she wants and mails them to The Lighthouse. Here, they are put on a dictaphone record. A Braille secretary, who is blind, transcribes the articles on to a Braille printing plate (3). The Braille plate is placed on the press (1) and the magazine is run off, each page being printed individually. Miss Day, who has edited The "Searchlight" ever since she left college, does her own housekeeping, shopping and cooking. She has a constant companion in her dog, Celia, who she is seen taking for a walk (4). Celia is now well-known through Miss Day's column in "The Searchlight".

From the Unesco Newsroom

STORING UP SUNSHINE: A new system of individual or central heating has just been developed by French scientists at Mont-Louis in the Pyrenees where, since 1952, a solar furnace has been operated on an industrial basis for the manufacture of refractory products. To extend the use of solar furnaces to heating buildings meant finding a way to store the calories produced by the sun in the summer for use during cold weather. The Mont-Louis scientists have now developed a method of storing solar energy in a sort of battery. Mass production of heating apparatus, they say, is already possible at a reasonable cost.

■ **AFRICAN STATES REQUEST UNESCO ASSOCIATE MEMBERSHIP:** UNESCO *has received requests for admission as Associate Members of the Organization from the Governments of eight states of the French Community: the Mali Federation, the Republics of Madagascar, Gabon, Chad, Ivory-Coast, Niger, Dahomey and of Central Africa. The requests will be considered by* UNESCO'S *General Conference when it meets in November.*

BIOLOGY COURSE ON FILM: A full year's high school biology course consisting of 120 colour motion pictures will be available to secondary schools in the U.S.A. later this year. Prepared by the American Institute of Biological Sciences, the films are basically of the lecture-demonstration type. Their sequences include material on living plant and animal life in forest, marine, mountain, desert and prairie environments, not normally available in the classroom. The series has been designed to be so flexible that schools of all kinds can make use of it, in part or in full.

■ **NIGERIA'S EDUCATION DRIVE:** *In Nigeria there are more schools—and more children going to school—in relation to the total population than in any other country in Africa. Latest statistics published (covering* 1958*) show that in Lagos, the federal capital, more than* 84 *per cent of the children attend school; figures for the Eastern and Western provinces are respectively* 81 *and* 73 *per cent. Compared with the previous year secondary schools have increased from* 477 *to* 514. *Higher education shows an impressive trend. Ten years ago future doctors, lawyers, engineers and administrators studied in British universities. Today the Federation has its own up-to-date University College in Ibadan and an engineering college at Zaria.*

A BOOKMOBILE FOR CALLAO: Eighteen months ago, a mobile library provided by UNESCO arrived in the Peruvian port of Callao. Within 12 months the loans registered by the bookmobile were more than twice those of the Municipal Library itself—25,888 compared to 11,729. Reading tastes sometimes provided surprises: in one group of houses of a poor community above the River Rimac, the authors most in demand were found to be Gandhi, Goethe, Lin Yutang, Cervantes, Shakespeare and the Abbé Pierre. The bookmobile of Callao has proved its value in bringing works which open new horizons of knowledge and afford a broader view of the world around them to people who might otherwise never have visited a library.

THE UNESCO PHILATELIC SERVICE

This stamp (denomination 40 hwans) has been issued by the Republic of Korea in honour of the U.N. World Health Organization. It can be obtained from The Unesco Philatelic Service which has stamps and first day covers issued by many Member States to commemorate important events in the history of Unesco and the U.N. (inauguration of Unesco's New Headquarters, Human Rights Day, World Refugee Year). As the agent in France of the U.N. Postal Administration, Unesco's Philatelic Service stocks all the United Nations stamps currently on sale. Information on items available, their price and the methods of payment, will be sent on request by Unesco's Philatelic Service, Place de Fontenoy, Paris 7e.

JEAN ROSTAND RECEIVES KALINGA PRIZE

JEAN ROSTAND, French scientist, science writer and philosopher, was awarded the 1959 Kalinga Prize for the popularization of science during a ceremony held recently at UNESCO House in Paris.

Mr. Rostand was the eighth winner of the £1,000 award, a personal donation of Mr. B. Patnaik, an Indian industrialist, which is offered annually by the Kalinga Foundation in the Indian State of Orissa as recognition to a leading interpreter of science and also to strengthen ties between India and the world's scientists. The winner is chosen by an international jury appointed by UNESCO.

The seven previous winners of the prize have been Louis de Broglie (France), Julian Huxley (United Kingdom), Waldemar Kaempffert (United States), Augusto Pi-Suner (Venezuela), George Gamow (United States), Bertrand Russell (United Kingdom) and Karl von Frisch (Germany and Austria).

The award of the Kalinga Prize to Mr. Rostand at the age of 66 is another laurel in a long career which has already seen his election to the Académie Française. It would not be quite true to call Mr. Rostand a science writer: he is both a scientist and a writer. He is known throughout the world for his research on heredity and genetics, based upon three decades of experimentation with frogs and toads. At the same time, he has written forty-odd books on his fields of research as well as on scientific thought, philosophy and pure science.

■ **ORIENT-OCCIDENT' FELLOWS:** *Twenty-four study grants are being offered by the Government of Czechoslovakia to enable Asian and African specialists and educators to study Czech culture, literature and music and the country's education system. The grants are a contribution to* UNESCO'S Major *Project for mutual appreciation of cultural values of the Orient and Occident. Among studies open to the fellows will be research on Comenius, marionette techniques, Slav languages and applied arts.*

Next Month

DOUBLE JULY-AUGUST NUMBER

EXPLORATION OF THE SEA

Two issues in one - 68 pages

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AFGHANISTAN. — Panuzaï, Press Department, Royal Afghan Ministry of Education, Kabul.

AUSTRALIA. — Melbourne University Press, 369 Lonsdale Street, Melbourne, C. 1, Victoria. (A. 13/-).

AUSTRIA. — Verlag Georg Fromme & Cº., Spengergasse 39, Vienna V (Sch. 37.50.)

BELGIUM. — For The Unesco Courier: Louis de Lannoy, 22, Place De Brouckère, Brussels, C.C.P. 338.000. (fr. b. 100.) Other publications: Office de Publicité, 16, rue Marcq, Bruxelles, C.C.P. 285-98; N.V. Standaard-Boekhandel, Belgiëlei 151, Antwerp.

CANADA. — Queen's Printer, Ottawa Ont. ($ 3.00).

CEYLON. — The Associated Newspapers of Ceylon Ltd, Lake House Bookshop, 100 Parsons Road, P.O. Box 244, Colombo, 2. (Rs. 9).

CHINA. — World Book Co, Ltd., 99 Chungking South Rd., Section 1, Taipeh, Taiwan (Formosa).

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FRANCE. — Unesco Bookshop, Place de Fontenoy, Paris, 7e. C.C.P. 12598-48 (7 NF.).

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IRAQ. — Mackenzie's Bookshop, Baghdad.

IRELAND. — The National Press, 2, Wellington Road, Ballsbridge, Dublin. (10/-)

ISRAEL. — Blumstein's Bookstores Ltd., 35, Allenby Road and 48, Nahlat Benjamin Street, Tel-Aviv (1£ 4.-)

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NEW ZEALAND. — Unesco Publications Centre, 100 Hackthorne Road, Christchurch. (10/-).

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SWITZERLAND. — Europa Verlag, 5 Rämistrasse, Zurich.
Payot, 40, rue du Marché, Geneva. C.C.P. 1-236.
"Courier" only: Georges Losmaz, 1, rue des Vieux-Grenadiers, Geneva. C.C.P. 1-4811. (Fr. S. 7).

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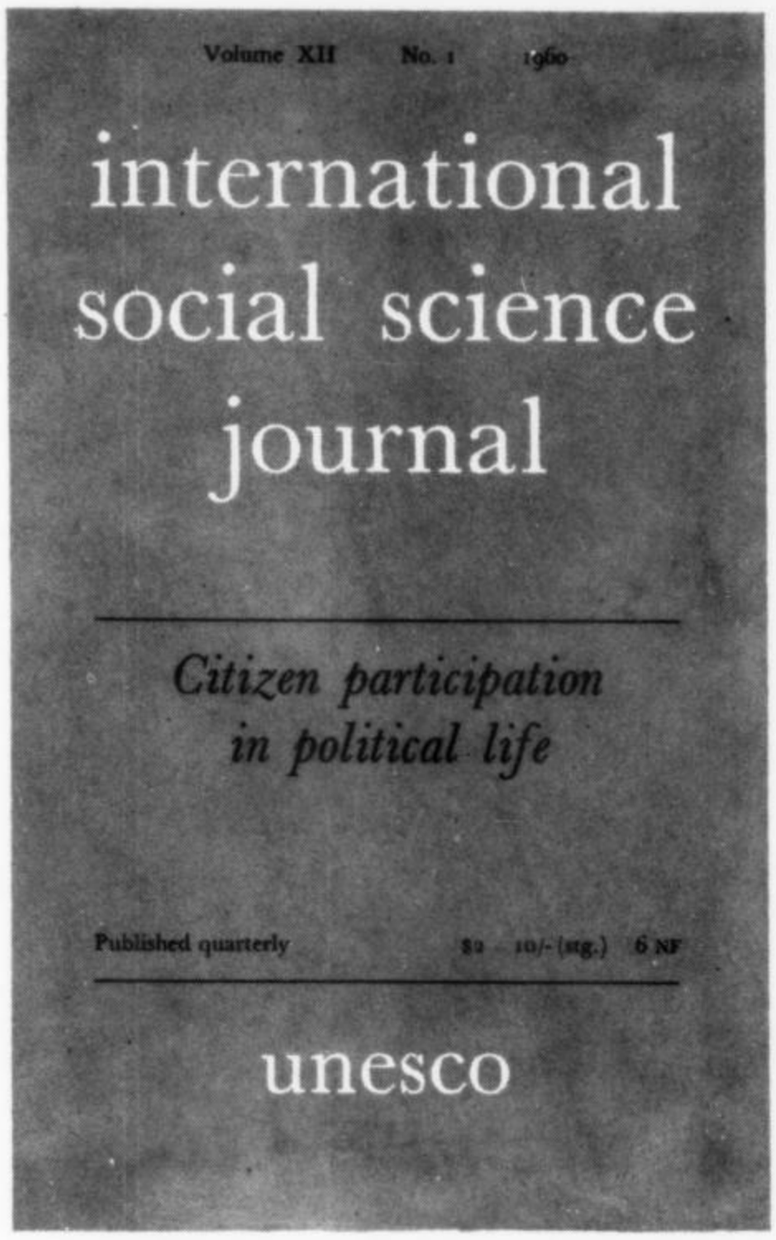

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BLIND BALLERINAS

At recreation time the co-educational school on Novo Alexyevskaya street in Moscow echoes to the shouts and laughter of youngsters playing or racing up and down stairways and corridors. The school is little different from thousands of others—except that all the children are blind. Photos shows a gay troupe of young girls enjoying a lesson in the school's dancing class. See story page 20.

C.P. Voss, Moscow